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RECOVERY AREA

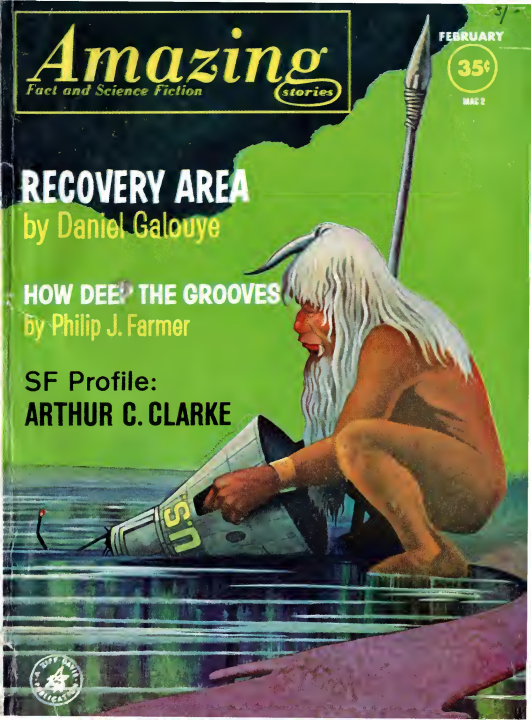
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HOW DEEP THE GROOVES

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SF Profile:

ARTHUR C. CLARKE



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Amazing

Fact and Science Fiction Stories

FEBRUARY, 1963

Vol. 37, No. 2

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"FIRST IN SCIENCE FICTION SINCE 1926"

NOVELLA

RECOVERY AREA

By Daniel F. Galouye 8

SHORT STORIES

THE SMART ONES

By Jack Sharkey 78

PHOENIX

By Ted White and Marion Zimmer
Bradley 88

THE TALE OF THE ATOM (A Classic Reprint)

By Philip Dennis Chamberlain ... 99

HOW DEEP THE GROOVES

By Philip Jose Farmer 106

SF PROFILE

ARTHUR C. CLARKE

By Sam Moskowitz 67

FEATURES

EDITORIAL 4

... OR SO YOU SAY 6

THE SPECTROSCOPE 119

COMING NEXT MONTH 123

Cover: Vernon Kramer

Illustrating Recovery Area

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EDITORIAL

FOR lo these many years the partisans of science fiction have been pointing out that one of the major functions of sf in our culture is to rattle the foundations of Certainty every once in a while—to make science realize that not every Scientific Law is necessarily so, and that there are more things in heaven and earth than may have been dreamed of.

Thus we are pleased when physicists identify anti-particles, and make science-fiction's early concepts of anti-matter stand up. We are pleased when funds are appropriated—even though ever so secretly—for the study of the possibilities of anti-gravity.

Perhaps most pleasing, however, is the recognition by Science-with-a-capital-S itself that it needs to keep an open mind about Certainities that are not so Certain any more. For example, in a recent issue of *Science*, the weekly magazine of the American Association for the Advancement of Science, an editorial noted that xenon, heretofore considered an inert gas, had now—

and easily—been made to react briskly with various fluorine compounds. The editorial read as follows:

"There is a sobering lesson here, as well as an exciting prospect. For perhaps 15 years, at least a million scientists have been blind to a potential opportunity to make this important discovery. All that was required to overthrow an entrenched and respectable dogma was a few hours of effort and a germ of skepticism. Our intuition tells us that this is just one of countless opportunities in all areas of inquiry. The imaginative and original mind need not be overawed by the imposing body of present knowledge or by the complex and costly paraphernalia which today surround much of scientific activity. The great shortage in science now is not opportunity, manpower, money, or laboratory space. What is really needed is more of that healthy skepticism which generates the key idea—the liberating concept."

To which we could add—but refrain from so doing—"We told you so."—NL

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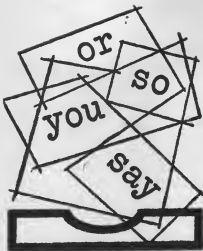
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● *Here's more fuel for the Burroughs-Kline battle:*

Dear Miss Goldsmith:

In reply to Charles Dixon's letter (AMAZING—November, 1962), about Otis Adelbert Kline and Edgar Rice Burroughs, I must disagree with Mr. Dixon.

I feel that for the very reasons he criticizes, ERB was a great writer. Burroughs was not all action and no thought. Kline should best be described as an action writer, no more. Burroughs spent much time in developing his characters and locale, and languages for unknown worlds. He could take you inside his characters to know what they thought, and their backgrounds so as to know why they thought and acted as they did. Burroughs wrote more

than action stories. The immature saw only action in them, but many others see serious themes, with broad satire on our modern society, as well as high adventure. He used his fiction to cover over political and economic themes that run throughout many of the stories. He exposes, condemns and damns various types of politics, Communism in one, fascism in another. For the days in which he was writing, his science was very sound, even though today science "facts" have changed, and will continue to change.

Kline was one of the best of Burroughs' imitators, but the pupil never equalled the master.

C. B. Hyde, President
The Burroughs Bibliophiles
454 Elaine Drive
Pittsburgh 36, Pa.

Dear Editor:

I just cannot resist commenting on Charles Dixon's letter in the November issue; so, here goes.

His main reason for preferring Kline to Burroughs seems to be his dislike of Burroughs style. P. Schuyler Miller defends this much better than I can (see ANALOG, November, page 160); so, I shall refer anyone who is interested to him and simply point out that anyone who compares ERB's style with that of an unabridged copy of one of

Kline's books (all of those currently in print were abridged by Avalon to fit a certain number of pages) will not find as much difference as Mr. Charles Dixon would have us believe there is.

In his last paragraph he states that Kline's heroes and heroines are a little more realistic than ERB's. I had noticed this before, but I do not think this is an advantage. All of ERB's heroes and most of Kline's are drawn larger than life, they are stronger, smarter, and braver than ordinary men. This has been true of every adventure hero. Don't get me wrong, I'm not against realistic characters, but against as unrealistic a background as ERB's or Kline's Mars a truly realistic character is out of place. To me Kline's best works were his "Grandon of Terra" stories in which the hero is consistently larger than life (though the fact that these are the only books by him that I have in unabridged editions may have something to do with it too).

Mr. Dixon's statement that Kline's situations were more exciting than Burroughs' was rather surprising to me. If he had read his Venus books I could have understood his making this statement, but the two books that he has read are not even near Kline's best (in fact one of them, *The Outlaws of Mars*, is

very nearly his worst). When compared to Burroughs or even the best of Kline these two books are shown to be lacking in truly exciting scenes.

There is an old Roman saying, *de gustibus non est disputandum*, which means that everything that I have said probably will not make one bit of difference to Charles Dixon. I wrote this so that those who had read his letter would not get the wrong idea about ERB. He has a perfect right to prefer Kline to Burroughs; I'll read both and have twice as much fun!

Carrington Dixon
501 Sylvan Dr.
Garland, Texas.

Dear Editor:

Now just one moment Mr. Dixon. I have read both Burroughs and Kline, and I think I can say honestly that ERB is the better writer. I don't have my copies of Kline handy, but I seem to remember that they were published between 1930 and 1935. The first ERB, *A Princess of Mars* was in book form in 1917 (check me if I'm wrong). Anyway what I'm getting at is that Kline's situations, characters and gimmiks generally are adaptations of ERB's. Granted Kline's hero arrives on Mars by some pseudo-scientific mumbo-jumbo rather than ERB's pure
(continued on page 124)

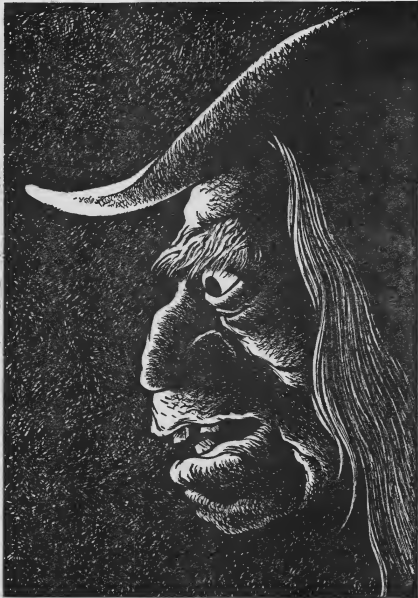
RECOVERY AREA

By DANIEL F. GALOUBE

Illustrated by KRAMER

There is no reason to write a blurb that will try to lure you into being interested in this story. It will grip you of itself within ten lines, and hold your mind and heart far beyond its last sentence. Quite simply, this story of Man's first landing on Venus is bound to become an all-time classic.





MOUNTING the booming fury of the thunder, Zu-Bach's anxious voice bellowed from the forest:

"K'Tawa! Where are you? There's great danger!"

K'Tawa jolted from Meditative Withdrawal. Sighing, he shook his maned head in weary resignation. Always, for Zu-Bach, there was something compelling attention. But never was it Spiritual—only Material.

The Old One disengaged his lean limbs from the cramping convolutions of Cogitative Posture. Then, with a rasping intake of breath, he resumed respiration.

"K'Tawa, answer! Remember the Thing That Trapped? I've quazed more of them—in the Upper Endlessness!"

Zu-Bach's more specific identification of the danger impressed the Old One but negligibly. It only verified his suspicion that the other's concern was trivial, Materialistic.

But Zu-Bach was young. Why, his quazehorn was still puny in its immaturity. Many sleeps had yet to transpire, no doubt, before he would be ready to enter Phase One in his Ascetic Ascendancy. With that realization, K'Tawa felt more tolerably disposed toward his youthful kin. But being tolerant certainly didn't mean he would have to indulge the other's minor whims.

The better course—much better—would be to remain quiet and hope that Zu-Bach would go away.

Which was what he seemed to be doing. At least, the sound of his thrashing about in the forest was growing more remote.

The Sorrowing Sea, restless with anger and racing before the lash of the wind, was hurling itself against the rock upon which the Old One sat. While he had Meditated, warm rain had plastered his beard against his chest. Above, the Perpetual Clouds writhed as they roared at one another and hurled fierce bolts down upon the inland forest.

Things That Trapped, in the Upper Endlessness—indeed! K'Tawa smiled at his young kin's imagination. But, just to be sure, he quazed up into the Clouds. There was nothing there, of course.

Yet, there was some hope for Zu-Bach. For, at least, his interest *did* extend in an encouraging direction. Throughout the First Phase of Ascendancy he would have to concern himself solely with the Upper Endlessness.

The Old One folded his arms, drew in a final breath and, thanks to the suggestive effects of Zu-Bach's words, was soon pondering the Dichotomy of Endlessnesses.

OF things without limit there were but two—the Upper and Lower. The former, of course, could be dismissed with a meditative flick of the wrist. Above the clear air there were Clouds, and Clouds, and Clouds—as far as one chose to conceive. The Lower Endlessness, on the other hand, was an infinite downward continuity of stone-impregnated mud and water—little of the former, but much of the latter. And between the Endlessnesses—

“K’Tawa! K’Tawa!”

He wrapped himself resolutely in his thoughts. Between the Endlessnesses, he resumed annoyed, was the Day—the Eternal Day. Then he puzzled over his conceptual concoction: an Eternal Day squeezed in between two Endlessnesses. Why an *Eternal* Day? Did that suggest there might somewhere, somehow be *another kind* of Day?

Troubled, he tried to envision a non-Eternal Day. Without luck, he cast about for a rational concept that would embrace a non-Day, or even an un-Day. But it was all beyond grasp. Moreover, not even in all the ancestral memory at his disposal, as far back as he could reach from the vantage point of Phase Seven, was there anything relevant to the enigma he had posed for himself.

“There you are, K’Tawa! Wake up!”

The Old One shook off the grip of strong hands on his shoulders and sprang to his feet.

“Never,” he rebuked, “never arouse anyone from Meditation in the Upper Phases! It might be fatal!”

The rain had stopped. But its final drops were clinging to the incipient quazehorn that rose from Zu-Bach’s matted white hair.

“There are many Presences in the Upper Endlessness!” he announced. “I counted them. Forty small ones and one large one!”

“Where are they now? I don’t quaze them.”

Zu-Bach pointed off to where the Sorrowing Sea met the Perpetual Clouds. “They’re gone—into the Horizontal Endlessness.”

K’Tawa dug a finger into his beard and scratched his chin. The *Horizontal* Endlessness—hm-m-m. Interesting concept. At least the boy did appear to have a *worthwhile* imagination. “About your Ascetic Ascendancy—have you decided—”

“The Presences, K’Tawa!” Zu-Bach seized his shoulders again. “What about the Presences?”

“You said they were gone.”

“But they’ll be back! They went straight that way.” He pointed with his spear. “They

won't turn. But soon they'll re-appear—from *that* direction." He indicated the opposite horizon.

The Old One laughed. "With Endlessnesses in all direction, how can they come back without turning?"

Zu-Bach spat in the sea. "They *did*—four times since I started looking for you."

THE Old One, without realizing it, had closed his eyes and opened his mind to the intriguing possibilities of a Horizontal Endlessness and Presences that could go off in one direction and return from another. If that concept were valid, he reasoned, then one was to believe that Endlessnesses might be bent back upon themselves. Which meant that—

"K'Tawa!" the other shouted. "The Presences are *dangerous*! I quazed that much. They're just like the Thing That Trapped. Remember?"

Indeed he did remember. But the Old One had never quite believed that preposterous account. Oh, he could quaze that Zu-Bach had encountered *something*. But the encounter may well have been with nothing more real than his prolific imagination.

"I wouldn't worry," he advised. "If they are Presences up there and if they *are* menacing,

we can at least be thankful they're not down here."

"But the Thing That Trapped was up there before it came down!"

K'Tawa was becoming quite impatient. His thoughts were at a most productive peak at the moment. And he should be directing all their energy into the Spiritual Development of Phase Seven, into his Search for Origin and Meaning, his Total Communion with the Fundamental Endlessnesses. But this non-Ascetic, this Prephase supplier of food was seemingly intent upon complicating his Withdrawal from the Material.

"What do you want me to do?" he asked finally.

"Help me quaze them next time they go by. If they *are* like the Thing That Trapped, we'll warn the village."

K'Tawa drew back. Warn the village indeed! And jar scores of Meditators from their Pursuit of the Spiritual Significances? What insolence!

Lowering himself on his haunches, the Old One said, "I must ponder it a moment."

AFTER attaining the Upper Phases, one never lied. And the fact of the matter was that K'Tawa *had* intended to explore the feasibility of disturbing the Ascetics. But hardly had he seated himself when he found

his thoughts drifting to the concept of an Endlessness folded back upon itself.

How fascinating! For instance, one might imagine a trip (by tunnel or cavernlike passage) through the Lower Endlessness, only to find himself breaking through another surface and gazing overhead at the same Upper Endlessness!

No. It wouldn't be *another* surface. It would be the *same one* bent back upon itself—just like the outside of the clayballs he used to play with in his pre-Phase days!

It was astonishing. Yet—it *was true!* From a thousand sources now, all buried deep in ancestral memory, came irrefutable verification.

A Lower Endlessness complete within itself and limited by its surface—its unbroken, spherical surface!

He leaped up, shouting exultantly. There was no doubt about it—he was mastering Phase Seven! No one else before him had done it. Could he dare hope to push on perhaps to an *Eighth* Spiritual Level?

Zu-Bach, he was aware, was only staring uncertainly at him. "The Presences," he asked. "What about the Presences?"

K'Tawa glowered—then restrained himself with the realization that Kinship must be respected, even the most distant.

How else could anyone hope for Total Communion? "What Presences?"

"There!" the other shouted, pointing his spear toward the Clouds. "Those!"

The Old One tilted his horn in the indicated direction. There were Presences, all right. Many small ones, all in a line—followed by one huge something that seemed to defy quazing. And he puzzled over the fact that the invisible things, too far away to be seen even if there were no Perpetual Clouds, were traveling incredibly fast. Yet they *appeared* to be moving extremely slow.

He quazed strength and power, hardness and intricate design and durability—purpose and determination.

Many Presences from a distant—a distant what? K'Tawa couldn't quaze the concept. It was too alien, too awful.

* * *

LEANING forward in his inertial couch, Colonel Scott O'Brien squinted through the forward port at the logistic train as it orbited ahead of the Argo into blazing sunrise.

One by one, the supply capsules—the resurrected Mercuries, modified Geminis, converted Apollos—streaked from the obscurity of night and flashed into scintillating brilliance. For-

ty vivid diamonds in a sparkling tiara around the cloud-veiled head of Venus.

O'Brien, alert and lean, sagged back in the couch and shifted his attention to the microwave radiometer screen. The Van Horstein scanner was penetrating both the ionosphere and the cloud layer at full gain, etching the grid with fine detail.

Venus' solitary strip of land, almost two thousand miles long but only a tenth as wide, snaked across the scope. He adjusted the transverse reference control and watched the red line leap into luminescence on the screen.

"TR locked in phase," he called out to Commander Green in the adjacent couch. "We'll hit the sequencer in fifteen seconds."

Green's characteristic grin was rampant on his blunt face now that the two hundred million-mile journey was at end. "Ready on the SQB."

O'Brien stared at the grid until the red line drifted to the central crosshairs, carrying with it the surface features it was tracking. "Mark!" he shouted. "Mark," Green echoed.

"Phased landing sequencer set for Recovery Area, Southwest Quadrant. Countdown under way. Ten minutes to Zero. Everything positive."

After an impatient moment,

O'Brien prompted, "Wastrom?"

There was no answer from the couch directly behind him.

Green leaned over. "He's probably praying again. Somebody sure slipped up when they psyched *him* out for this junk-et."

The Colonel reared back. "Wastrom!"

There was abrupt movement aft. "Yes?"

"The train—how about it?"

"Oh. Retro systems positive."

"All forty?"

"I don't see any red lights."

"How about the 'chute packs?"

"All green. Everything's ready. Think we'll make it okay?"

O'Brien didn't answer. He was tired of reassuring the electronicist. What made the situation all the more ridiculous was the fact that Wastrom, youngest of the four-man crew, was also the most rugged and competent-looking. But it was clear now that he had left most of his guts somewhere between Earth and Venus.

"Nine-thirty and counting," Green announced.

And a vigilant voice responded from the right rear couch, "All Argo systems positive."

O'Brien glanced back and nodded in unconscious approval of the contrast between Frank Yardley and the other civilian

member of the crew. As the Argo's nuclear technician, Yardley was almost 15 years Wastrom's senior and, seemingly, half the latter's size. But O'Brien wouldn't have swapped half a Yardley for all the Wastroms he could find.

NINE minutes to Zero," Green said.

O'Brien watched Yardley's hand dart to a toggle switch. A shudder ran through the ship as coupling bolts exploded.

"Capella stage separated," the nuclear tech said.

Colonel O'Brien relaxed, passing a hand back over the bristles of his closely-cropped, blond hair. That left the Argo clean for entry. All that remained now of what had once been a massive configuration was the III-D 'chute assembly, Jason capsule, Procyon IV-B solid fuel stage for blastoff and the Spica fin-and-retro pack. One hundred and fifty-five feet of precision engineering and intricate instrumentation that would soon be plunging planetward. Meanwhile, the Capella II, with its oxygen difluoride-diobrane fuel load, would be dutifully waiting for orbital reunion.

Commander Green's voice broke the silence. "Eight-ten and counting. Ready, Scott?"

"Ready." O'Brien reached for the attitude sequencer lever.

Green intoned, "Eight even."

Throwing the control, O'Brien settled back while the ship lazied about. The forty supply caps, all arow and aglitter against the fiercely white cloud mantle, drifted from view as the Argo turned her back on them and steadied in braking attitude.

"You—you suppose it's hot down there?" Wastrom asked.

O'Brien concealed his annoyance. "A dozen fly-by probes showed that the 'severe heat' isn't connected with the surface at all."

"The preprobe boys were led astray by a high electron-density in the ionosphere," Yardley added. "Our soft-landed probes proved it rarely gets over a hundred planetside."

"But how can we be sure?" Wastrom demanded.

"Well, it goes like this," Green offered without the trace of a smile. "The last instrumented probe broke an egg on a Venusian sidewalk. It didn't fry. Seven minutes. All systems positive at Post One."

O'Brien adjusted the phased entry system oscillator and coaxed out a higher-pitched whine. If Wastrom was prepared to trot out his fear that the soft-landed probes had not detected lurking, hostile life forms, he might decide on complaining about his eardrums instead.

Thus far, it had been a re-

markedly uncomplicated trip. And O'Brien could only hope the two other deep-space trains following at one-week intervals would have it half as good. They probably would—if they had no Wastroms aboard.

In all, it was a fairly impressive effort—as well it should be, what with a price tag of forty billion. But you didn't quibble about costs when the Reds, in effect, held the moon as a protectorate with the sanction of every noncommitted—and trembling—nation on Earth.

A score of lunar bases, all secretly armed but with the Kremlin "guaranteeing" their military neutrality (without inspection, of course), comprised a formidable ace-in-the-hole and an insurmountable diplomatic club. Earthside armament systems neutralized each other. But the Soviet lunar development, begun five years before the U.S. had acquired the capability of landing a man on the moon, was the margin of difference.

Unless Uncle balanced the scale by developing his own reserve extraterrestrial backstop, he might as well dig his hole.

O'Brien shrugged unconsciously. So Venus gets tabbed and trains of supplies and personnel, followed by a caboose of interplanetary armament, are in deep space in a one-shot arsenal-building project.

WHAT if there's life down there?" Wastrom's voice quaked above the oscillator's whine. "Hostile life, I mean. Intelligent enough to stay away from scanners."

Before O'Brien could dig up one of his well-worn rejoinders, Commander Green declared, "Three minutes, thirty seconds to Zero."

"I said," Wastrom persisted, straining forward, "what if there's hostile life? The scanners spotted only two four-legged things and one small biped—nothing else. Where're the lesser forms? What if—"

"Three minutes, thirty seconds!" Green repeated irately. "That was *your* cue, Wastrom!"

Pulling against his harness, the Commander leaned back toward Wastrom's couch. His hand darted between tubular braces and flicked a switch on the electronicist's console.

There was another shudder of distant concussion and Green said, "ComPac ejected."

"Sorry," Wastrom offered.

O'Brien checked the separation on his scope. The orbital radio relay station, a bright blip close to the center of the screen, was pulling away steadily. With its signal-sensing antennae, it would be a necessary link in Earthside-Venus Base communications.

Still scowling, Green removed

his earphone. "ComPac signal strong and clear." Somewhat more softly, but still loud enough for the Colonel to hear, he added, "They'll know we got this far at least."

O'Brien chuckled. "Oh, we'll get you back safely to the wife and kids."

Wastrom raised a hand. "I said I was sorry."

Two action-filled minutes of final checkoff operations passed in silence as the Colonel sketched his imaginary diagram of an entry trajectory for the Argo that would plop it down in the center of the target, with forty supply caps spaced at half-mile intervals westward through the Recovery Area.

Then Green warned, "Ten seconds to Entry Zero."

At the count of five, O'Brien punched in the stud to activate the landing sequencer.

Now there was nothing to do but hang on and wait.

II

GRUDGINGLY, K'Tawa followed his young kin back toward the village. This imposition on his Contemplation was most inconsiderate. But there was little he could do except respect Zu-Bach's urgent plea. The Code of Kinship required no less.

Still, his own interests were

impelling at the moment. So he compromised. With eyelids lowered in Visual Withdrawal, he relied on the perceptual faculty of his quazehorn to guide his footsteps through the forest. Meanwhile, he consigned full Meditative attention to his Seventh-Phase pursuits.

Progressive Ascendancy came quickly, encouraging the hope that his recent results had not been spurious. There was, for instance, a remote forebear (whose name appeared to have been something like "Y-Lem-Ah") who had managed to pass on to ancestral memory-searchers of the future a vivid impression of his features. He had done that by spending endless periods gazing into the shining surfaces of ancient objects his people had found on their tiny—"island"?

Then K'Tawa's brow wrinkled, even despite his semi-Withdrawal. Y-Lem-Ah had had no quazehorn—none whatsoever! Nor had any of his people—at least not until the time their "island" had sunk in a Minor Debacle and he and some of his kin had floated on rafts to Onlyland.

The recollection faded and K'Tawa was left with a hollow, searching loneliness. Yet he was exuberant in his accomplishment. Nobody had yet reached back to the time when Onlyland

had evidently been "Mainland"!

Up ahead, Zu-Bach paused and waited. "You'll tell the Meditators how important the Presences are? They respect *your* opinion."

"Why shouldn't they? Am I not the most advanced Contemplator?"

"Then you will help me convince them?"

"I can do no more than attest to the presence of the Presences."

"But they'll be able to quaze as much for themselves!"

"Of course they will. And what you should be concerned over is the possibility that they'll also quaze your obstinate rejection of Spiritual Ascendancy."

Suddenly intolerant, Zu-Bach turned and stomped ahead. The Old One followed, resenting the demanding Responsibility of Kinship.

The village was a confusion of stone-thatch huts that grew from the soft mud and, like a mangy nakedness, laid bare in its spot the rain-washed sweep of forest.

K'Tawa, with Zu-Bach beside him, paused at the edge of the clearing and watched the Pre-Meditation Ceremony of the Summoning of the Hot Tongues.

Exemplar L'Jork stood solemnly before the Drying Hut, elevating to the Upper Endlessness a bundle of crisp leaves. His

ample quazehorn was rigid in its upthrust orientation with the Perpetual Clouds. His drawn face, lined with the humbling evidence of self-sacrifice and frustrated Spiritual ambition, was both sober and serene. K'Tawa recognized the inappropriateness of the title Exemplar. But it wasn't because of any shortcoming on L'Jork's part. Rather, the demands of leadership in the provision of communal necessities severely limited his own Ascetic Ascendancy—to the extent that he had never progressed beyond Fourth-Phase Contemplation.

THE exemplar came forward and the other Meditators closed ranks behind him. He placed the leaves on the Central Slab and knelt before taking up the Starting Stones. Then, with all the others crowding around and blowing rapidly at the leaves, he began striking the rocks together.

Soon the first Hot Tongues materialized and the Meditators blew even more eagerly. Additional Hot Tongues appeared among the leaves and the dark Vaporous Offerings began lifting itself gracefully to join the Perpetual Clouds.

Unable to constrain himself any longer, Zu-Bach surged forward.

"Meditators!" he shouted,

waving his spear. "Your attention!"

Exemplar L'Jork glanced up and scowled. The Elder Contemplators broke their compact circle around the Slab and faced the source of disrespectful interruption. With a final issue of Vaporous Offering, the Hot Tongues vanished from the leaves.

Behind his young kin's back, K'Tawa spread his hands apologetically. "Your indulgence, Exemplar. Zu-Bach would be heard."

"In view of your sponsorship," L'Jork said solemnly, "we shall hear him then."

With another helpless gesture, K'Tawa signified that he was, as yet, certifying nothing.

Several women poked their heads out of the huts to see what was going on. One, departing with her yet unborn child for the Retreat for Delivery and Training, paused curiously.

"We have quazed forty-one Presences in the Upper Endlessness!" Zu-Bach blurted out. "Evil Presences! And they will come down!"

L'Jork glanced at K'Tawa and the Old One nodded confirmation.

Several of the Elders, disinterested and intent on getting started with their Meditation, began drifting off. After all, the Materialistic was Zu-Bach's responsibility, not theirs.

"But this is important!" K'Tawa's young relative pleaded. "They may turn out to be Things That Trap!"

L'Jork regarded the Old One for further verification.

"I didn't quaze *that* likelihood," K'Tawa said. "But if they are, as Zu-Bach says, Things That Trap, I should imagine all we would have to do is stay out of their way."

The Exemplar thoughtfully combed his beard with long, curving fingernails. "This Thing That Trapped—what was it like?"

"It was broad and round at the bottom and narrow and round at the top—all shining and hard, determined and cunning." Zu-Bach directed his words at the remaining Elders, who even now were beginning to turn their backs. "I found it on the beach and watched it through many periods."

Only L'Jork and K'Tawa remained to listen—the former but perfunctorily; the latter, dutifully. All the Elders had seated themselves on their individual Thinking Slabs in front of their huts and had assumed Cogitative Posture, heads bowed under the weight of burdensome quazehorns.

NEVERTHELESS, Zu-Bach went on, addressing his appeal directly to the Exemplar.



"It had an eye that wasn't an eye at all but that kept looking around. I quazed that it was searching and I stayed hidden all the while. It breathed in the air and lapped up the water and caught the rain. It scooped up sand and mud and spoke in a continuous chatter that—"

"Spoke?" L'Jork repeated. "To whom?"

"I don't know. I couldn't quaze that. I couldn't even quaze what it was saying in its silent, humming voice. But I was

watching from the bushes when a herola came trotting up and paused to sniff the Thing. Suddenly there was an opening in the side and—"

"And the herola went in?" the Exemplar asked cagily.

"Of course not. Herolas are too cautious to do anything like that. A puff of green air floated out and the herola fell still. An arm, thin like the shaft of a spear, appeared through the opening and pulled the animal in. Three sleeps later I found the



herola outside again—dead. The Thing That Trapped had finally quit chattering. I could quaze it was lifeless. I hurled it into the Sorrowing Sea.”

“It was small enough for you to hurl?”

“Yes, Exemplar.”

“Then it couldn’t have trapped you. How about the forty-one Presences in the Upper Endlessness—could *they* trap one of us?”

“One is large enough to trap many of us.”

K’Tawa, who had been considering snatching a few moments of Contemplation, straightened alertly and looked around. All the Meditators were stirring on their Thinking Slabs. They had quazed *something*. And now L’Jork and K’Tawa themselves were quazing it—a lynko.

The small, friendly animal, had entered the village clearing. Sauntering in its upright attitude, the furry creature dragged its tail behind as it foraged about the huts. And each Mediator rose and touched his quazehorn respectfully as it passed.

K’Tawa quazed Zu-Bach’s feeling of insignificance. The animal had received the consideration from the Meditators that he had been denied. But, the Old One realized, Zu-Bach would eventually learn that the Code of Kinship extended sympathetically to the presumptuous lynko because, unlike the other creatures, it walked upright.

The Exemplar bestowed his respectful gesture on the lynko and turned his back to Zu-Bach. “Very interesting,” he said, heading for his hut, “—your Thing That Traps and the soaring Presences. I’m sure they will provide me with subject matter for Contemplation through many Withdrawals.”

Frustrated, Zu-Bach gripped his spear and stormed off.

L'Jork paused, turned and nodded understandingly at the Old One. "Keep your quazehorn on the boy, K'Tawa. He's impulsive. Needs guidance if we ever expect to get him started on Ascendancy."

The Old One indicated his agreement, then trailed after Zu-Bach. He overtook his lesser kin at the edge of the forest.

"For all they care," Zu-Bach said, sulking, "one of the Presences could come down and trap the entire village!"

"The first step toward Withdrawal," K'Tawa began soothingly, "is to learn Forced Disassociation with the Material. Next—"

"Oh, lynko dung!" the other exclaimed.

Then, above the swish of softly-falling rain, above the Ceaseless Thunder's roar, a great howling rent the sky somewhere near the sea. And a queer, hazelike glow of prolonged Lightning limned the bellies of the Perpetual Clouds with an angry, pink cast.

"They're coming down!"

"There!" Zu-Bach shouted. "They're coming down!"

He started to race off toward the coast. But K'Tawa exercised the Prerogative of Undeniable Seniority.

"Stay!" he ordered. "It is almost sleep period. We will have nothing more to do with the

Presences 'til after firstmeal."

Shoulders sagging submissively, Zu-Bach followed him back toward their hut. And the Old One foretasted the pleasant period of Meditation he would enjoy before sleep came.

* * *

COLONEL O'Brien stood before the still-closed outer hatch, slipped the plastic respirahood over his head and secured its wrap-around oxygen cylinder to his waist. Then he reached under the transparent bag to reposition his throat mike and earphone.

"Testing," he said softly.

And the comsystem grated with Commander Green's instant acknowledgement from the other side of the air lock.

Beside the Colonel, Wastrom raised his own hood toward his flushed, tense face, then paused. "What if all that carbon dioxide comes up under this bag?"

The Colonel constrained himself from complaining that O'Briens weren't ordinarily *that* lucky. "Venus' atmosphere is eighty-five per cent carbon dioxide," he recited tonelessly. "CO₂ is heavier than the stuff we breathe. It'll stay down. The oxygen, being lighter, will stay up in the hood."

"I see," Wastrom said, as though he hadn't often been reassured during training.

O'Brien reached for the hatch handle. "Ready?"

"Can't we wear space suits—for protection against infection?"

O'Brien closed his eyes in momentary pursuit of fortitude. "One: It wasn't planned that way. We have no portable air-conditioning units. You'd swear you were in an oven. Two: Tym-aroff showed conclusively just a couple of years back that a specific relationship has to exist between pathogen and host. That relationship has to be developed through thousands of years of evolution, not just during a few hours' exposure. In short, the chance of infection from a Venusian bug is nil. Ready?"

Reluctantly, Wastrom positioned his mike, introducing his voice into the comsystem. "You think twelve hours was long enough for the ground to cool off from the Spica's braking—"

"Look, Wastro—we've got thirty-six supply capsules out there that survived entry. They're waiting to be assembled into U.S. Venus Base. We have only one week before Train Beta arrives. Either—"

"I'm ready," Wastrom broke in, shrugging his adequate shoulders.

Green's voice sifted through the Colonel's earphone. "How

about me helping you on pickup, Scott?"

"No. We'll stick to the planned procedure. You and Green will monitor the scope and match our blips with the capsule blips."

O'BRIEN jerked on the handle and the hatch swung open on a dismal panorama of shadows and deeper shadows. The hot, humid stuff that passed for atmosphere enfolded him like a wet blanket just taken out of an oven.

Outside, it was twilight of the stormiest day he had ever seen on Earth. The drenched ground and, in the distance the rain-slicked forest still bore evidence of the torrential downpour that had just turned the Jason capsule into a deafening drumhead. Concussionlike thunder roared from the cloud-packed megaphone of the sky and O'Brien counted a half-dozen bolts lashing the ground simultaneously.

He swung out the boom, fastened the nylon line's harness around his chest and stepped out of the hatch. Down he went alongside one hundred and fifty towering feet of the Argo, past the Procyon IV-B stage, past the Spica fin-and-braking assembly.

He landed on the slippery but surprisingly firm ground, squirmed out of the harness and gave it a tug to start it on its

way up. Then he went around the Argo and checked the lightning arrester for proper grounding where it had harpooned into the soil—insurance against having the Procyon's load of solid fuel ignited by a bolt.

"Coming, Wastrom?" he asked. When there was no answer, he called out again, then looked up.

The electronicist was on his way down. But he was out of contact. His earphone could readily be seen dangling by his waist.

"Trouble?" Yardley inquired over the radio.

"Nothing unusual. Wastrom just lost his earphone."

Yardley continued: "I'm sorry about all this, Colonel. And I feel guilty since—well, he and I represent the civilian side of this outfit."

"I understand how you feel, Frank. And thanks."

"No," the nuclear tech insisted. "I want to make up for it. I'm checked out on most of his chores. If you'd like to shift any of them on my shoulder—well, it's sturdier than it looks."

"We'll see. When it sinks in that we made it over safely and nothing's going to happen, he may come around."

O'Brien lifted his hood, cupped his hands around his mouth and shouted, "Wastrom damn it! Fix your earphone!"

GREEN didn't have to direct them to the first supply cap in the Recovery Area. Clinging to a hillside, its orange 'chute vividly contrasted the olive-gray grass ("moss" would have been a better word, as far as O'Brien was concerned) on which it lay.

Explosive bolts popped and the conical capsule flared open on a six-legged Bondley Terrain Walker, top speed twenty m.p.h. with its three hundred kilowatt-hour Reinhold battery.

That, together with coaching from the Jason's observation-command gallery, brought them swiftly if not smoothly to the next two capsules. There they acquired a Mark VI Modified Electrical Crane-Tractor and a train of 'cat-tread dollies.

Within several hours, O'Brien, having counted upon but received little help from Wastrom, had loaded the train with the contents of twelve supply caps.

Securing the last load to the final dolly, he leaned back against one of the Terrain Walker's legs. He held his breath while he removed the respirator and sleeved perspiration off his face.

Miserly, he inventoried his acquisitions. They included such indispensable items as a Collard Mark IV nuclear powerplant with accessory battery chargers,

Del Rouad transmitter-receiver keyed in with the orbiting Com-Pac relay station, inflatable Mannerheim Home Environment Igloo and a Westinghouse Oxyaccumulator-Compressor.

Those—together with the field laboratory equipment, the main consignment of O₂ cylinders, Spica stage fuel containers, non-concentrated food supply and other useful if not essential articles—were beginning to make the place seem more like home by the minute.

"Let's go back," Wastrom urged, fidgeting with the Terrain Walker's tiller.

But Yardley's voice vibrated in the earphones. "Your next cap is only a couple hundred yards off—beyond that hill."

"We're loaded," the Colonel explained, heading for his tractor. "Anyway, the rest of the stuff'll keep. Five more capsules and we'll have one complete set of everything."

"We've come out a lot better than I hoped we would," Green said. "I'm sold on this system—a supply train in two sections, one half a duplicate of the other."

"Every piece of equipment has its backup."

"We were lucky too. Of the four caps lost in entry, no two were alike. So we're not completely out of anything."

O'Brien started up the tractor

but paused to reach under his hood and wipe more perspiration from his forehead. Actually, there was nothing to worry about. Train Beta was due in another week. It was a duplicate of Train Alpha. If the first mission had succeeded, Beta would establish a second base. If not, the backup train would contribute its resources to the Alpha effort.

Then in another week Train Gamma would arrive, bringing its missile crews and the first consignment of interplanetary weapons with their ace-in-the-hole warheads. Indeed, there was nothing leisurely or stinting about the operation.

SCOTT—GREEN again. Our scope just lost the signal from the farthest capsule down the line."

"Which one is that? What's its cargo?"

There was a pause while Green checked the master sheet. "Power tools, medical supplies. You figure something happened to the cap?"

"No. It's about time at least one minor piece of equipment failed. I'm thankful it was just a Here-I-Am transmitter."

Falling in behind the Terrain Walker, O'Brien sent the tractor crawling toward the Argo. Then he noticed Wastrom was nervously securing his belt around

his neck, pinching in folds of the hood.

"What's that supposed to be for?" the Colonel asked.

"That damned carbon dioxide—I can smell it!" the electronicist cried. "It's poisoning me!"

O'Brien had no comment. What could he say when he was beginning to suspect the other was just indulging his eagerness to grumble? Wastrom had certainly been sufficiently filled in on the nonpoisonous nature of Venus' carbon dioxide and nitrogen. He couldn't have forgotten that the only danger the atmosphere posed was one of suffocation as a result of oxygen starvation.

"Colonel, this is Yardley," the earphone hummed. "Those caps we haven't recovered yet—a little water won't hurt them, will it?"

"Of course not. Why?"

"We just lost our screen blip from the *second* farthest capsule—the one with the standby long-range radio gear."

O'Brien frowned. "I won't buy another Here-I-Am failure."

"I don't think you have to. You see, the scope shows the far end of the capsule line stretching out across the beach of a bay. There the capsules almost missed land."

Green came in. "So we figure transmission is being grounded out by a rising tide."

"Sounds logical. We'll check it out tomorrow. Our first concern is blowing up the Mannerheim Igloo and hooking up the Del Rouad. Then we'll be able to contact EarthOrb Station next time the ComPac relay swings into position."

The Terrain Walker and tractor crested a hill and O'Brien felt somewhat more at ease at the sight of the Argo five miles off—proud and competent as it reared cloudward and fitfully reflected the brilliance of distant lightning.

Then his brow furrowed in belated consideration of the lost capsule signals. Venus wasn't *supposed* to have any tidal action! But then, that didn't rule out the possibility that persistent winds might occasionally pile up water upon the beaches.

III

HIS limbs protesting unaccustomed travel, K'Tawa lowered himself on his haunches but resisted lapsing into Meditation. Instead he watched Zu-Bach cautiously approach the next descended Presence.

Laying down his spear, the latter knelt beside the shining object and directed his quazehorn at its various portions. Then he paused and glanced back at the Old One.

"I don't quaze any danger,"



K'Tawa assured. "And it certainly isn't intended for Trapping."

Zu-Bach pounced upon the Presence, raised its glistening hulk over his head and hurled it to the ground. He retrieved it and smashed it against a boulder. Then he dunked it in the restless sea, hauled it out again and began beating on it with his spear.

K'Tawa smiled his approval. The youngster appeared to be enjoying himself immensely. To say the least, he *was* working off a goodly amount of energy. Maybe he was getting all the Materialistic inclination out of his system at one time.

Zu-Bach pushed eagerly on to the next hated Presence and K'Tawa trailed along. Then, as the other reached incautiously down for the thing, the Old One shouted a warning.

He went over, closed his eyes to avail himself of the concentration that Visual Withdrawal would provide, and carefully quazed the object with a meticulous circular motion of his horn.

"There's much danger here," he disclosed. "Tremendous force and power—something like the Hot Tongues in the Pre-Meditation Ceremony. I quaze, perhaps, a fierce and deadly noise."

It was all in the realm of only extreme possibility. But he had decided to put it on a bit thick

and see if he couldn't humble Zu-Bach with an appreciation of the inadequacy of his own quaze-horn.

"Also," he went on, "I see maybe a great angry cloud billowing into the Upper Endlessness, taking with it part of On-lyland and leaving another bay to embrace the Sorrowing Sea."

Warily, Zu-Bach retreated from the Presence. But, on second thought, he reached out and snapped off its long, thin horn. The thing's silent voice went dead and he grunted in satisfaction.

K'Tawa regarded the Presence. It *was* dangerous. So he decided not to move it into the cave where he had hidden the other two. One he had saved because he had quazed its ability to talk with other remote Presences in the Upper Endlessness. The other he had rescued on impulse from Zu-Bach's avid grip. Its contents had been queer and useless—only stale air, all pressed together. But he had vaguely quazed that a beneficial purpose might be found for it.

The next fallen Presence was quite harmless and the Old One watched Zu-Bach attack it with keen enthusiasm. The boy had accepted it as a challenge, since it was twice the size of the last one and since he could lift it only with great effort.

K'Tawa quazed ahead to the distant great Presence that stood upright and conveyed its impression of lurking power and clever ability. And he puzzled again over the four little, living Presences. There, too, he detected treachery and cunning, hate and possessiveness. Zu-Bach had not yet quazed the minor, soft Presences that moved around. When he did, though, there was no doubt that he would be furious. K'Tawa knew him that well.

Thinking next about the concept of more things in the Upper Endlessness, the Old One, without realizing it, surrendered to the welling urge for Cogitative Withdrawal.

WAS it normal, he wondered, for Presences to exist up there? IF there were many more, as suggested by the total impression he got from the landed things, they must be coming from *somewhere*. But how could there be a *somewhere* in the Endlessness of Perpetual Clouds?

Then, from the depth of his mind, an obscure ancestral recollection incidentally offered the suggestion that the Clouds might not be Perpetual. Nor might they extend throughout the Endlessness.

Perplexed, K'Tawa asked himself the inescapable question: If the Clouds were not

everywhere up there, then *what* existed in the Cloudlessness?

The answer came like a whispered voice from the long-dead past: Blackness. And in that Blackness—

"K'Tawa, let's move on. I've exhausted all the possibilities of destruction with *this* Presence."

The Old One snapped from Withdrawal and stared irately at his relative. At times, he reflected, it required no small degree of fortitude and restraint to pay due respect to the Code of Kinship. There he had been—on the threshold of Phase Eight, perhaps even hopeful of glimpsing the Great Debacle. But now—well, he felt like exclaiming, as Zu-Bach would have done under comparably disappointing circumstances, "Oh, lunko dung!"

The time eventually came, as K'Tawa had quazed it soon would, when Zu-Bach had run out of Presences to destroy. But, by then, he had gotten a quazescent of the four minor, living Presences.

Amused, the Old One had watched him drop the shattered remains of the last provocative thing and turn toward the towering, glistening object in the distance. Now, tense and alert, he was sweeping his horn imperceptibly from side to side, finely sorting out details of what lay ahead. Wedged around the

tip of his upthrust spear was a battered remnant of the last Presence he had destroyed. But it was obvious that he didn't intend to dislodge it. Rather, he was displaying it proudly as a symbol of triumph, as he was the other piece of the Presence he had wrapped around his wrist.

"K'Tawa—"

"I know. Four *living* Presences."

"Queer things—like the lynko. But without tails."

"What else do you quaze about them?"

"Hate—plenty of hate. Scorn too. And treachery and greed and watchfulness."

K'Tawa nodded commendingly. Zu-Bach seemed to be developing his talents a bit more fully now. "Can you quaze what must be done?"

"Yes." The other's grip tightened on his spear. "They must be destroyed. They will do more than Trap. If they get the chance, they will—kill?"

"I'm afraid so. At first I was confused. There are obviously similarities of a sort between them and us—such as the fact that they breathe, even though it is only stale air. But the similarities are only Physical. Spiritually, we have no common ground—as far as I can see. They are totally Materialistic."

"There is no relationship then?"

"None whatever. When you stop to think about it, how could there be when they come from the Endlessness?"

K'Tawa rose from his haunches, ignoring the complaints from his tired muscles. "Onlyland will be much the better when they are removed, together with all their lifeless Presences."

"They shall be removed," Zu-Bach vowed.

"But you must be careful. There is danger of a sort. However, I'll come along and quaze it out for you."

RATHER than approach directly, Zu-Bach swung over to the forest. And the Old One smiled in satisfaction over the other's prudence. It perhaps signified the proximity of long-awaited maturity.

"They *are* evil Presences, aren't they, K'Tawa?"

"Yes. I can quaze anxious fear and wariness, distrust and malice. Feel no compunction about destroying them, boy. Not when one of them wouldn't hesitate to destroy another, if it meant personal gain. One is particularly like that."

"And the other three?"

"I'd say they too are of the same nature—by extension. Let's look at it this way: The Meditators Meditate while we let you and the other Prephasers

do all the routine work. It must be the same with the four intruding Presences. Three of them have more important jobs to do. The fourth we quaze as particularly evil, I suppose, because he will do whatever killing must be done."

Directing his horn at the back of Zu-Bach's head while they walked, K'Tawa sensed surging anticipation. As a matter of fact, he was inclined to interpret it as a lust for the fascinating excitement that lay ahead.

Ordinarily, the Old One would have been somewhat concerned over Zu-Bach's purely Materialistic preoccupation. But expediency had to be served. And his young kin would only be doing what *must* be done if Spiritual Ascendancy was to be preserved as a way of life.

That much he could quaze clearly.

* * *

A HUNDRED feet in diameter, compartmented by flexible partitions and rising twenty feet above the Venusian surface, the Mannerheim Igloo rustled its plastic shell. Ironing out the final wrinkles, it strove for rigidity. Electrical energy for its oxyaccumulator-compressor and air-conditioners flowed smoothly from the Collard nuclear power-plant Yardley had set up in a conveniently-located coastal cave.

Outside, the tail end of a brisk shower drummed against the transparent dome. Inside, O'Brien and Green, each with an arm wrapped around Yardley's neck, tried a second chorus of "Home Sweet Home." The song ended on a sour but exuberant note and Yardley went over to where Wastrom stood staring out at the bleak landscape.

"Come on, get with it, Calvin!" Yardley slapped him on the back. "We've got our toe-hold!"

Wastrom's stare was unresponsive as he moved several feet away along the inner curvature of the plastic wall.

Disconcerted, Yardley returned to the two officers.

"Let him sulk," Commander Green advised.

"We're well over the hump," O'Brien added. "Even if he doesn't lift a finger, we've got it made."

"As long as we don't run into any complications with the electronic gear," Yardley reminded. "Some of that stuff would be pretty complicated to anybody but Wastrom."

"It's preset," Green said. "All we have to do is uncrate it."

O'Brien glanced around, smugly surveying the now stiffly partitioned interior of the Igloo. Being inside—without a respirahood, with eighty-degree air bringing relief from the hu-

mid hothouse out there, with the reassuring *chug-swish* of the oxyaccumulator pulsing in his ears—brought an unanticipated pleasantness.

Within a few days, he reminded himself, the Igloo wouldn't be so starkly bare. There would be bunks, the soft lights of a humming communications-command section seeping through transparent partitions, a galley redolent with the odors of familiar foods—even shower stalls. And it would make little difference that the water being sucked out of the ocean would be carbonated.

The colonel cast a solicitous glance at Wastrom, then went over. "What's the trouble, Calvin? Anything I can do?"

"No." The other surveyed his hands. "I don't suppose so."

But when O'Brien started to walk away, Wastrom added hastily, "It's just that—I don't know. Maybe sometimes you expect too much of yourself. I guess it's like Green said: They must have done a lousy job psyching me out."

O'Brien half turned from the pathetic sight of a robust man capitulating to unreasonable fear. "You'll be okay," he said, but not with conviction.

"But it *isn't* right to go streaking off across God's universe!" Wastrom's voice rose abruptly. "We're challenging—"

He paused, forcibly restored his composure and exposed his hands once more to his gaze. "Colonel, I'm the youngest man in this crew. Yardley's almost forty-five. But I don't suppose I have half his guts."

"None of us is as calm as he appears."

"But I ought to be the one least concerned. I don't even have a family, like Yardley and Green do."

"Look at it this way: We're here. Everything's working out. No complications. And getting back Earthside is going to be a lot easier."

"If we get back."

"All right, Calvin—why do you imagine we might not?"

WASTROM motioned outside the transparent shell. In the distance, O'Brien recognized what the probe data processors had dubbed a "venusow" sloshing through a swamp.

"That's why," Wastrom went on softly. "That's life—Venusian life. It's a lot like ours. It exists and moves around and breathes. But it *can't* do those things because there's no oxygen in the air. It—"

"Animal life on Venus," O'Brien recited, his patience extended, "is adapted to a biochemistry in which nitrogen replaces oxygen in the energy relations of the organism. Carbon

dioxide comes into the picture too. The nitrogen is oxidized to nitrate and carbon-nitrogen bonds are formed."

"That's just the point! Life is possible. Animals *can* live here—not only the ones we know about, but perhaps ones of a higher order too!" Wastrom's eyes were restless again and his voice unsteady.

Green shouted from across the large compartment, "Time to get to work." He brought over respirahoods and oxygen tanks.

YARDLEY covered the stacks of supplies with plastic tarps while Commander Green completed the network of protective lightning arresters. O'Brien, with Wastrom close by so he could keep an eye on him, had the Del Rouad transceiver cabinet slung under the tractor's crane and was moving it into position beside the Igloo.

He paused and adjusted his throat microphone. "Yardley, you'd better start staking down our dome before the next storm comes up."

He sent the tractor creeping forward with its load, but paused again and called directly down to Wastrom, "Move that Walker out of the way so I can get this thing in place."

Wastrom mounted the Terrain Walker and started it up, setting the drive for reverse motion.

"Watch it!" O'Brien shouted. "You're backing into the Igloo!"

Wastrom brought the Walker to a halt and stared down over its rear legs. A footpad had become entangled in one of the Igloo's tie-down grommets.

"Well, don't just sit there!" Green admonished, coming over. Then, "Never mind, I'll free it myself."

But Wastrom had already leaped from the cab.

Instantly, Green shouted and dived out of the way as the immobilized machine clanked back to life and lurched forward.

Wastrom fell sitting in the soft mud and scurried as far from the runaway Walker as he could get. "My sleeve! It—it caught in the switch as I jumped!"

The Walker attained full speed, plopping one footpad down in front of the other. When the entangled tie-down line pulled taut, the entire Igloo fell in behind the machine in an inexorable march across the beach.

Green helplessly seized a fold of the plastic as it went by and tried to hold the inflated dome back.

Yardley raced after the Terrain Walker. But it was obvious he would never overtake it.

O'Brien swore, started up the tractor, then lost half a minute lowering the encumbering Del

Rouad cabinet from the crane.

When he finally backed around, however, he could only sit there and watch the Walker splashing out into deeper water. A gust of wind caught the Igloo and sent it scudding ahead of the legged contraption until its tie-down line finally snapped free.

Ten minutes later it was swallowed up by a rainstorm several miles out at sea.

COMMANDER Green finally broke the silence. "Thank God for little girls and backup supply capsules."

O'Brien said, "We've got our work cut out for us now."

"What's first on the program?" Yardley asked.

Green glanced at Wastrom, who was standing sullenly off to himself. "I suppose lynching's out. In which case we can hie ourselves into the Recovery Area and retrieve the backup Igloo."

"Unless," Yardley suggested, "Colonel O'Brien wants to try to set up the Del Rouad gear *without* the Igloo so we can get a message back to EarthOrb Station."

"That's what we *should* do," the Colonel admitted, "since we've already been here twenty-four hours. But we'll try to get the standby Igloo set up first."

Wastrom came over finally,

his hands spread out characteristically. "I couldn't help it. You see, the Walker's pad got—"

Green reached for the electronicist, but O'Brien caught his arm.

"Just find some place to sit down," the Commander snapped, "—and stay out of our way!"

Wastrom retreated a step, his puzzled expression half obscured by the wrinkled plastic of his respirahood. "I'm trying to be helpful, if you'll let me. I was going to suggest that we just suspend operations until we get our balance again. It's been thirty hours since we've had any sleep."

This time O'Brien had to place himself tactfully in front of Yardley, who showed indications of imminent explosion.

"I'm going after the backup Igloo," the Colonel said hastily. "Yardley, you get on the Jason's scope and guide me."

He turned to Commander Green. "Ken, I've got an idea we might be able to raise the Com-Pac relay station next time it orbits by if we retune the Jason's transmitter and step it up. See what you can do. Wastrom, that's in your line. Give him a hand."

Yardley and Green struck off for the Argo.

O'Brien paused to stare along the shore. Disappearance from the scope of two Here-I-Am sup-

ply capsule signals had suggested an unstable water level. But now, as he surveyed the huge outcropping of rock a hundred yards down the beach; he could see no evidence of tidal action. The mouth of the cave in which they had set up the Collard nuclear powerplant was still several feet above the water line.

He headed for the tractor, watching first Yardley, then Green ride the constant-tension lift up to the Jason capsule's hatch. Yardley and Green—but not Wastrom.

Puzzled, he spun around. Following along, the electronicist was carrying a brick-size rock. When O'Brien stared questioningly at him, he tossed it in the air and caught it.

"I think you ought to let me retrieve the backup Igloo, Colonel," he proposed as they continued back toward the Alpha Base site. "After all, I'm the one responsible for this complication."

"We'll operate more efficiently," O'Brien pointed out, "if we stay within our assigned capacities."

THEY had reached the tractor when Green came in over the comsystem. "Wastrom, come on up here and—"

"Colonel!" Yardley's anxious voice broke through. "The supply cap signals! They've all disappeared from the scope!"

Perplexed, O'Brien stared first at the towering Argo, then out into the Recovery Area. Thunder rolled angrily overhead and a bolt of lightning crashed into the swamp beyond the ship. Another speared directly down at the Jason capsule. But the Argo's arrester took the full charge with no arcing.

"Check your gear, Frank," O'Brien suggested. "Maybe it's a matter of gain adjustment."

"No, it's not the gain. I'm picking up *your* blips clearly."

Then Wastrom's face froze behind its plastic hood as he stared off toward the nearby trees.

"Good God!" he shouted, his hand whitening in its grip on the stone. "*Look at that!*"

O'Brien whirled around, then fell back astonished.

Men! Naked giants! Two of them—stepping out of the forest. Great brown bodies with immense shocks of coarse, white hair and leering, grotesque faces both horrible and primitive.

The foremost, carrying a long pole with something shining and terribly familiar wrapped around its tip, loosed a roar that was finally drowned out only by a somehow mightier blast of thunder.

"They look *human!*" Wastrom exclaimed. "And that thing on the stick—it's part of a supply capsule!"

The comsystem was overwhelmed with the startled voices of Yardley and Green, who had evidently bolted back to the outer hatch.

Covering the ground in immense strides, the nearer giant reached the first mound of supplies. He dropped his staff and scooped up a half buried boulder. Raising the rock again and again above his head, he pounded the pile of equipment into rubble.

Wastrom, crouching with O'Brien behind the tractor, hurled the stone he had been holding. It glanced off the creature's back with no apparent effect.

"What is it?" Yardley rasped over the comsystem.

"It's twenty feet tall if it's an inch!" Wastrom observed. "And look—it's got a *horn* growing out of its head! They both have!"

O'Brien tugged at the other's sleeve. "Let's work our way back to the Argo!"

The creature paused before a pile of neatly stacked oxygen-difluoride cylinders and an adjacent mound of diobrane tanks. He barked at his companion, who had drawn up calmly beside him. The latter barked back and they moved on from the Spica stage's reserve fuel to the Del Rouad transceiver. In three blows, the metal cabinet was

shattered, its electronic viscera spilled out upon the ground.

HALF concealed behind a ridge, O'Brien and Wastrom scurried for the Argo.

The more restrained giant seized the obviously enraged one's arm and pointed at the fleeing figures. But the other shook him off, helfting a still unopened supply capsule. Grunting, he heaved the modified Mercury into the sea.

"There goes our oxygen!" Green moaned.

Wastrom reached the constant-tension line and secured the harness under his armpits. Before he could activate the hoist with the pull of his weight, though, O'Brien grabbed on to the nylon rope. Together they started up—but at a painfully slow rate.

The bellowing creature raced forward, but paused to lift the crate of field laboratory equipment and hurl it to the ground. Then he skirted a Gemini capsule containing construction tools and explosive charges and headed once more for the Argo.

O'Brien almost lost his purchase on the line but resecured it by hooking his arm over part of Wastrom's harness.

Abruptly there was a startling explosion next to his ear and the crisp smell of gunpowder drifted in under his hood. Wastrom had

a revolver in his hand and was aiming down at the lunging giant.

The electronicist fired twice more before he lost his grip on the gun. O'Brien was certain he had scored at least one hit. At any rate, the thing's roaring was now at a frenzied pitch.

But that didn't discourage the creature. He beat his fists against the Procyon stage of the ship until it seemed the hundred and fifty-foot-long configuration was rocking under the impact of the blows.

O'Brien and the electronicist reached the hatch and were pulled in as the boom retracted automatically.

"Good God in Heaven!" Green swore. "This can't be happening!"

"What'll we do?" Yardley asked, staring down at the ravaged Alpha Base site. "Blast off?"

"Not with the Spica's fuel still down there." Wastrom knelt and peered below. "It's incredible! Humanoid life on Venus!"

The two giants met amid the devastation and barked at each other until the larger discovered a crate of supplies he had overlooked. Infuriated, he hurled it at the ship, missed, then rubbed his shoulder where a trickle of dark fluid appeared to be erupting from the skin.

Kicking the tractor over on its side, he rejoined his companion and they headed for the forest as thunder boomed accompaniment to their footfalls and rain obscured their withdrawal.

Green eventually recovered his voice. "Let's get out of here! The lift can take us all at one time!" He reached frantically for the boom. "Help me, Scott! It's hung up!"

The others only stared at him as a jagged streak of lightning lanced down a quarter of a mile away.

"The lightning arrester!" the Commander explained. "That giant tore it loose! If the Procyon's fuel load takes a bolt, I don't want to be within a mile of the Argo!"

IV

WHEN Zu-Bach finally snored himself awake and rolled over on the shelfbed, K'Tawa swam up out of Meditative Withdrawal.

The Old One rose, uncoiled from Cogitative Posture, ran briefly through the Stretching Exercises and glanced over at his kinsman.

Zu-Bach sat up and massaged his shoulder. "The sting is gone."

K'Tawa quazed the flesh around the wound and learned that the small foreign object had worked itself out. Moreover,

the pierced skin had almost healed.

Kneeling beside the shelfbed, Zu-Bach directed his horn in a methodical scanning motion back and forth across the mud floor of the hut. Then, "Here it is—the stinger."

He rose holding a tiny piece of hard substance between his thumb and forefinger.

K'Tawa shied from the thing. "A hate pellet. Get rid of it."

Zu-Bach went over to the wall, swung the rain shield open and tossed it out.

"Leave it open," the Old One said. "The air is so stale that I wouldn't be surprised if L'Jork could conduct his Ceremony of the Hot Tongues in here without even the help of the Meditators."

The other turned, silhouetted by the weak light coming in through the rain shield opening, and hesitated. K'Tawa could almost guess the question before Zu-Bach asked it. Eagerness was that plain among his features.

"The Presences, the living ones—what are they doing now?"

"I'm not too certain there are any living Presences remaining. Soon after you fell asleep there was a tremendous noise. When I quazed in their direction, I encountered a heat and light that were stronger than thousands of Hot Tongues."

"And the Presences?"

"As I said, I'm not at all sure you need concern yourself with them any longer."

"But more will come. We both quazed that much."

K'Tawa drew in a deep, disappointed breath. His lesser kin had not sated himself on the Material. His purpose was still, oh, so singular. It was clear that even now he had no appreciation whatsoever of the Spiritual Values.

"When the time comes," the Old One said heavily, "I'm sure you'll be equal to the situation—and perhaps without my help."

"Oh, you don't think I can quaze the dangers of the lifeless Presences on my own."

"Now, now, boy," K'Tawa chided. "I'm not belittling you. I'm just trying to make you understand that you've been taking up my time during a period when I should be fervently trying to accomplish *Eighth-Phase Contemplation*."

Zu-Bach bristled, with no apparent appreciation at all of the significance of Meditative Ascendancy. "I don't need your help any longer. You think I didn't quaze the danger in the cave by the sea, don't you? Well, I did! And I'm going to do something about *all* the dangers we left behind!"

"Suit yourself, boy." K'Tawa wondered whether he shouldn't

feel guilty about not discouraging the other. But, on second thought, he had certainly discharged all his responsibilities under the Code of Kinship.

THE hut's main shield swung open and Exemplar L'Jork entered. "I quazed crosspurposes. Is anything wrong?"

"Zu-Bach," the Old One explained, "has still not had enough. He wants to destroy more of the remaining Presences."

"Oh come now, boy," L'Jork scolded. "Materialism has its place. But—"

"K'Tawa will tell you that more Presences are on their way through the Upper Endlessness."

"On their way—from where?"

"I don't know. But when they get here, there will be *more* dangers to cope with. And perhaps more after that. All while you and the others sit around and Meditate!"

He spun on his heel and strode for the main opening.

"Be careful, Zu-Bach," K'Tawa called after him. "Don't underestimate the danger in the cave."

After he had gone, L'Jork asked, "Will he be all right?"

"I think so. The main reason he's going back, as I quaze it, is that he left his spear behind."

"Maybe you *should* go too."

"The Code of Kinship is not without its limitations. Besides, L'Jork, I'm on the threshold of Phase *Eight* Meditation!"

"Phase *Eight*," the Exemplar repeated, visibly impressed. "You don't say!" Then, with unconcealed envy, "Do you suppose you might *actually* glimpse Origin and Meaning in their fullness?"

"Possibly."

"Then you *have* no responsibility under the Code of Kinship. Indeed not. Your first obligation now is Meditation."

On that K'Tawa agreed, and with but few reservations.

"I'll let you alone," L'Jork said respectfully, "so you can get on with your work."

* * *

Deep Cogitative Withdrawal came quickly for K'Tawa this time, as it had on every recent occasion of Meditative Introspection. It was as though he were becoming marvelously efficient in achieving the Ascendant Attitude. Why, it wasn't even necessary for him to engage in the Preliminary Mental Exercise any longer.

Through the fragmented experiences of scores of remote ancestors, he pursued the elusive concept of the Upper Endlessness, searching almost desperately for reference to the Blackness that had already been suggested by the long-gone past.

This Blackness that shared the Endlessness with the Perpetual Clouds, he wondered—what was its nature? How widespread was it?

Thousands of disembodied memories swam up at him. But they only lapped at the fringe of his curiosity—until—

Once there had been a woman named—"Vir-Ela." She had been young and attractive and—

Intolerant, K'Tawa shunted aside the welter of irrelevant, personal information that would swamp him with trivia if he let it. And he guided his questing concentration down to the very core of the matter.

Once Vir-Ela had looked up into the Blackness of the—"night"? (The latter was a concept he couldn't grasp, but he passed it over in fear that the rest would elude him too.) And in that Blackness were myriads . . . (the word escaped him, but he had at least trapped its meaning) myriads tiny, shimmering motes of light, similar to the Hot Tongues but pinpoint and precise in definition and brilliant, unmoving in their—"celestial"?—positions.

The motes inhabited the Blackness and *it was the Blackness that was Endless, not the Perpetual Clouds!* Actually, he learned in astonishment, the Clouds were neither Endless nor Perpetual. Their existence had

been short indeed, as measured against the great time cycles observed by the brilliant, dancing motes. And the full reach of the Clouds was unbelievably insignificant compared with the vast scheme of things beyond them.

INEXORABLY, the word-visions that came from Vir-Ela faded and K'Tawa, bereft, cried out in despair. But the ancestral memory bridge spanning the Vir-Ela generation had only gone a step further, he saw suddenly. It had been drawn to the more remote anchorage by the close bond that had existed between the woman and her mother.

The latter, whose name appeared to have been "Cel-Aroa," had vividly recorded for posterity's sake magnificent, sweeping scenes of Onlyland.

But it *wasn't* Onlyland! For the Old One knew that, compared with the Sorrowing Sea, Onlyland was but a spit of mud and stone. And the land Cel-Aroa had thought about had been vast and almost unbroken, with only small bodies of water here and there.

Now he was getting down to Origins, perhaps. It might even be that he had penetrated so deeply into Phase Eight Ascendancy that he was reaching back to *before* the mysterious Great Debacle!

The concepts he was receiving were no less than amazing! Cel-Aroa's people had been as great in number as the very land on which they lived was vast in area. And on that Vastland were—what?

He intercepted the concept of huge, shining huts. Only, they weren't huts because they all served inconceivably more complicated functions than the dwelling places to which the people were presently accustomed. And these glittering structures had been piled up beside one another at many locations on Vastland, all reaching for the sky and all full of and surrounded by swarming people.

Oh, but all the people were different then—*so different!* Not a quazehorn among them! ("That came later," the voice of Y-Lem'Ah from the more recent "island" generation seemed to mock.) And there was *something* about their size and their convictions, their manner of life. But what?

Now he had it! Those illustrious ancestors, those incomparable intellects with whom all the Meditators sought to Commune—they, themselves, were not Spiritually Inclined! Not in the least.

Was he to conclude that Ascetic Ascendancy was a way of life that took shape *after* the Great Debacle?

What, he wondered intensely, *was* the Great Debacle?

But no responsive thread of memory arose to satisfy his poignant curiosity.

He had gone *so* far, he realized as he swam exhaustedly up out of Withdrawal. But he had *so* much *further* to go if he expected to fathom True Origin and Full Meaning.

Nevertheless, K'Tawa found himself yearning for the power and wisdom, the might of those quazehornless ancestors of the remote past, even if all those attributes *were* only Materialistic.

* * *

TWENTY feet back from the cave entrance, Colonel O'Brien tossed restlessly in half sleep. His boot thudded against an oxygen cylinder and instantly he was wide awake.

He sat up groggily, his need for rest after thirty hours' work still not fully satisfied. The dim, everlasting light of Venus' murky sky seeped into the chamber, etching somber shadows on dank walls. In the distance, inside a second entrance to the cave, the Mark IV Collard reactor hummed in wasteful production of electrical energy that would never be used, that was even now discharging itself wantonly to ground.

O'Brien untied the cord that was pinching the respirahood se-

curely about his neck. Now that he was upright, there would be no danger of the oxygen being displaced by Venus' carbon dioxide. Quietly, so as not to disturb the others, he returned the misplaced O₂ cylinder to the stack from which it had rolled.

"Not many left, are there, Scott?"

He started at the suddenness of Green's whispered voice, further muffled by his respiration. The Commander came over and knelt by the sparse supply of oxygen containers.

"For the few we do have we can thank Yardley," O'Brien reminded after making certain his transmitter was turned off too. "When that creature got through with Alpha Base, Frank was the one who realized we were wearing the only O₂ we had left. If he hadn't risked his life to toss those cylinders out of the Argo, we wouldn't be around to talk about it now."

As it was, the Colonel added under his breath, the remaining supply of oxygen was no less than fatally inadequate. And Train Beta wasn't due to arrive for another *five* days.

Squatting, Green slapped his knee. "Well, what do we do now—go back over the Recovery Area and see what we can salvage?"

"There won't be *anything* to pick up."

"You think that unicorn thing smashed *all* our other caps?"

"You saw what he had wrapped around his staff. Those Here-I-Am capsule blips didn't just *disappear* from the scope."

Yardley had awakened. He came over and joined them, sitting silently on his haunches and appearing to O'Brien like some prehistoric savage brooding in the dismal confines of his cave.

"Good God!" Green lurched up. "Train Beta—I'd forgotten about them!"

"I hadn't," O'Brien said gloomily.

"What'll we do?" Yardley asked. "There's no way of warning them! That creature smashed both our Del Rouad transmitters!"

"I don't know," the Colonel admitted. "Unless—yes, there is a chance of getting through to them—at the last moment."

Yardley stared expectantly at him.

"If they don't hear from us," he went on, "they'll be guarding our field comsystem frequency on the way down."

"We can warn them then!" the nuclear tech exclaimed.

"Yes. But there are two drawbacks. One: It'll be too late to stop their landing—and they won't be able to get off again until after they pick up their Spica fuel capsules."

"And the other objection?" Green asked.

"You won't like it. I don't. The oxygen we have left will last the four of us only two days. If we're going to get any warning at all off to Train Beta, we'll have to arrange it, somehow, that *one of us* will be around for *five* days."

NOBODY said anything.

O'Brien turned and faced an arm of the sea that ran along the far wall of the cave. "It isn't a decision we have to make immediately."

"When *do* we have to make it?" the Commander wanted to know.

"If four of us use up oxygen for twenty-four hours, there'll still be just about enough left to carry one from that point up to Beta's estimated time of arrival."

Green paced to the subterranean river and back. "I'm glad Wastrom isn't awake to hear this."

"Oh, Wastrom's all right now," Yardley assured. "It took those giants to snap him out of it. But did you see how he reacted? He even attacked one with a rock and wounded it with his gun."

Green and O'Brien exchanged awkward glances and the latter said, "Sorry to disappoint you, Frank. He apparently did come

around for a while. But it didn't last long. You'd have seen for yourself if you could have stayed awake a while longer."

"He went to pieces," the Commander verified, "—screaming about violating God's laws and getting the giants as a punishment. Finally whimpered himself to sleep."

Yardley appeared thoroughly disappointed.

"What puzzles me," O'Brien went on, "was his gun—what prompted him to bring it along in the first place, how he hid it."

"I suppose if you were as terrified of space and Venus," Yardley offered, "you might have smuggled a weapon along too, even though you were assured you wouldn't need one."

"Right. But the point is that he didn't appear to be terrified when he sneaked the revolver aboard. He didn't show any neurotic tendencies at all until a week ago."

Green stared at O'Brien. "Where's the gun now?"

"I've got it. You didn't think I was going to give it back."

Yardley tensed. "Listen!"

O'Brien heard it too—a clatter of metal on metal coming from the direction of the demolished Alpha Base. It sounded like someone walking through a field of tin cans.

"Those giants are back!" Yardley shouted.

"Quiet!" O'Brien cautioned. "They don't know we're in here."

Green crossed fingers on both hands and displayed them high in the air. "Maybe that thing'll go to work on the reserve Spica fuel this time!"

Yardley grinned expectantly. "Colonel, if the Irish have the luck market cornered, you'd better cash in your share right now. Our troubles may be over if that Venutian starts banging those oxygen-difluoride and diobrane containers together!"

"It'll be just like another Argo going up!" Green assured.

"That makes for nice wishing," the Colonel commented. "But I find it more than coincidental that he purposely passed up the Spica fuel first time around—the Gemini with the explosive charges too."

Green protested, "You're not suggesting the thing *knew*—"

FROM the subterranean stream behind them came an abrupt splash.

When O'Brien spun around, Wastrom was standing by the oxygen cylinders, reaching down for another.

"It's coming back!" he shouted. "Can't you hear it out there? It won't let us alone until it's destroyed everything we've got!"

Wastrom faced the stream and lifted the cylinder over his head. But before he could hurl it,

Green drove his shoulder into the electronicist's midsection and sent him flailing back.

"We've got to destroy everything!" Wastrom screamed. "We've got to do what it wants!"

"Shut him up!" Yardley urged. "Before he has a dozen giants breathing down our necks!"

Green followed through and smashed a fist into the electronicist's face, even as the latter filled his lungs for another outburst.

Then the Commander knelt beside the unconscious Wastrom to make certain his respiration had not been damaged.

"Back!" Yardley cautioned. "Get back! That thing's right outside!"

O'Brien could hear the giant's labored breathing, like the measured hiss of a safety valve



on a steam engine. He drew Wastrom's revolver from his pocket.

There was an enraged growl and a great, leering head poked into the cave entrance. But when the shoulders couldn't make it through, the creature drew back and roared. Then a massive arm rammed in and a clawing hand swept back and forth from wall to wall.

The revolver barked three times as O'Brien emptied it at the thing's biceps. One of the slugs grazed flesh.

Bellowing, the giant lunged back. And O'Brien, tracing his retreat by the dwindling sounds of his breathing, went cautiously ahead.

"Careful, Scott!" Green urged.

Hesitating, O'Brien stepped outside and watched the massive creature withdrawing back through the base site. "It's leaving."

"But it'll be back," Yardley guessed. "I'm sure of that."

"It wouldn't if we had a few weapons," Green said.

"Our Venutian *does* seem to hurt and scare easily," the Colonel agreed. "If we could manage to kill one of them, I'll bet the others—if there's a whole settlement of them—would promptly turn tail."

Green ventured farther from the cave. Pensively, he walked a short distance along the beach,

then turned toward the base site.

"Ken," O'Brien called after him. "Where are you going?"

The other paused. "There may be just two of those things. Or there may be a whole nest. We've got to know what the odds are. I'm going to find out."

"Ken, come back here!"

It was apparent, however, that he wouldn't be stopped.

O'Brien started to follow.

But Yardley trapped his arm. "Would you really like to kill one of them, Colonel? I think I know how it can be done."

O'BRIEN, staring anxiously after the Commander, was restrained by the realization that the information Green sought *should* be passed on to Train Beta. "How would you do it, Frank?"

"Set a trap." The nuclear technician indicated the heavily insulated cable that snaked across the beach from the Mark IV Collard reactor. "Our tractor's not damaged—just knocked over on its side. I checked it while Green was salvaging those tins of food. We can right the tractor with its own winch, assuming that if the Venutian comes back he'll want to kick it over again. But this time it'll be parked on several insulating layers of plastic tarps. And this high-voltage cable will be bolted to the tractor's frame."

K'TAWA bestirred himself from Meditation, reluctantly yielding his grip on the inherent, sometimes incomprehensible impressions that had been seeping into his conscious. That these impressions were being dredged from the very bottom-most depths of genetic recall left no doubt that he was well into Phase Eight Ascendancy.

At the moment, however, he was concerned over Zu-Bach. Even now he could quaze his youthful kin as he left the coastal plain and entered the forest. Zu-Bach, it appeared, was fuming over—something.

The Old One steadied his horn in that direction. Why, it seemed the boy had been stung again by the little Presences, who evidently were still somewhere near the beach!

Then K'Tawa tensed. Not all the living Presences were on the coast. One, he could plainly quaze now, was following furtively behind Zu-Bach, advancing from tree to tree. Only, Zu-Bach's thoughts were so full of rage and vengeful plans that he hadn't noticed the small one at all.

K'Tawa considered going out to meet his kin and making an issue of his utter lack of vigilance. But Zu-Bach would only be resentful of that Exercise of

Seniority. Anyway, the Old One saw now, there was no evidence of harmful intent on the part of the trailing Presence. Curiosity, perhaps. And a tinge of bitter frustration. But certainly he harbored no immediate aggressive plans.

Still quazing, K'Tawa watched Zu-Bach lumber up over a hill. After he had started down the other side, the Presence clambered up the elevation and dropped on his chest to peer over the crest. He remained there a long while, staring down into the valley and studying the village. Then he rose and headed back for the coastal plain.

Zu-Bach, meanwhile, had reached the village.

And K'Tawa delayed his return to Contemplation while he listened to his relative trying to interest several of the Meditators in an account of what had happened to him. But Zu-Bach had forgotten that this was the Feast of Introspection and that the entire period, from sleep to sleep, was set aside for Ascetic Ascendancy.

Thwarted in his quest for attention, Zu-Bach impetuously strode for the nearest hut. He brushed disrespectfully past its Meditating owner and lowered himself onto the shelfbed within.

K'Tawa continued with his own Introspective Quest. And, as a stepping-off point, he concerned

himself with an unrestrainable flow of questions that phrased themselves spontaneously in his mind:

Why was the Horizontal Ed-
lessness (correction: the curved-
back-upon-itself surface) almost
all water now, whereas once it
had been practically all land?

This concept "night" that he
had gotten from Vir-Ela—could
he reasonably assume that its
corollary was "day"?

And what had the wet-dry,
night-day dichotomies to do
with the Great Debacle?

Then, from a distant ancestral
source, so close to the Great
Debacle that it conveyed all the
terror and confusion associated
with that event, came a momen-
tous suggestion:

There was a *third* dichotomy
directly involved in the exclusive
interrelationships: "stale-poison-
ous," as they applied to the air.

Even in his rigid Posture,
K'Tawa squirmed in protest. It
was an incredible pairing! Di-
chotomies were made up of op-
posites. But here was one with
parts that were almost compati-
ble. "Pure-poisonous," for in-
stance, would have been logical,
as would have "pure-stale." But
—"stale-poisonous"?

He turned from the incongru-
ous matter as another link
abruptly established itself in the
ancestral recall chain. This time
he had reached back for a hand-

ful of perceptions from one who
had called himself "Dis'Pauz."
And the memories were all the
more welcome because they had
obviously been acquired just be-
fore the Great Debacle—when
knowledge and ability were at a
peak.

From that source the Old One
received the illuminating im-
pression that the surface-bent-
back-upon-itself had once had
another name—"The World."

Moreover, The World was *not*
alone in the Upper Endless-
ness. There were other The
Worlds—shining deep in the
Blackness' vastness!

K'Tawa almost bolted from
Withdrawal. *That* explained the
origin of the little Presences!
They had come from another
The World! And the one nearest
his ancestors' Vastland enjoyed
a day-night dichotomy, just as
Vastland itself once had before
the Debacle!

Then, as though caught up in
a raging vortex of the Sorrow-
ing Sea, the Old One found him-
self dizzily fighting a relentless,
confusing assault of concepts
and impressions.

Night-day. Wet-dry. Stale-
poisonous. Still another polar
pair: Blackness-Light, in its
more than ordinary implications.
Shimmering motes and The
Worlds. Quazehornless ances-
tors. Vastland—Mainland—Is-
land—Onlyland—

Night was doubtless the corollary of day, just as wet was so obviously the opposite of dry. And Blackness of Light. But did "little ancestor" have any opposite? Was Blackness synonymous with daylessness. And did—

Then into his foundering Meditation was thrust a quite rational and almost calming recollection bequeathed by Dis' Pauz:

There was the Endless Blackness with its shimmering The Worlds and with its . . . ("lightgivers" was the closest word K'Tawa could find for the concept), which also cast brilliance about them.

And suddenly, deep within the Blackness the Old One saw a huge, white, sparkling cloud—odd-shaped and wispy. And shy, too, for it always hid its long, thin—"tail"?—from the Light-giver with which it was associated. K'Tawa saw, too, that Dis' Pauz was terrified by the Cloud from the Blackness. And his terror was shared by all the billions of quazehornless people.

Did the Cloud have anything to do, the Old One wondered, with the Great Debacle?

At this point K'Tawa's Meditations, though compelling, were becoming quite burdensome and exhausting. Consequently, he did not know when Contemplation trailed off into sleep.

WHEN he awoke from prolonged Posture, he quazed that Zu-Bach had gone from the other hut. He was in the forest now, returning to the coastal plain. And his scorn and wrath had renewed themselves.

K'Tawa stretched and quazed ahead to the beach. Now that he definitely knew the little Presences were there, he had no difficulty discerning them. They were in the cave, not too far from the Greatest-of-All-Perils. In order to save their stale air, they were resting, having just finished—having just finished—

The Old One rose trembling. Just as Zu-Bach had originally feared, they had turned out after all to be Things That Trap! They had just devised a most ingenious snare—not one that would simply take its victim, but one that would *kill instantly!*

And that victim, K'Tawa saw plainly, would be Zu-Bach.

The Old One rushed from his hut, trying to quell his inner anxiety so that the other Meditators wouldn't quaze it and be disturbed. He struck out through the forest.

How malicious were the small Presences! Until now, he had hoped they might not all be as evil as the one had seemed to be. But, whereas before only the one had wanted to kill treacherously, now that one hardly appeared interested in slaying. The other

three, however, were lustful in their eagerness to take Zu-Bach's life. What a queer reversal of quazable attributes among the Presences!

Pushing as swiftly as he could through the forest, K'Tawa focused his attention on the Trap. Most clever indeed. And it involved a peril that was quite obscure and original—so much so that he felt certain Zu-Bach would never quaze it for himself.

It seemed that the Presences had taken their Thing That Crawls and put it in full sight on the beach near their cave. They had attached to it a hidden something that would leap like the very Lightning itself into Zu-Bach's body.

K'Tawa, his aged lungs burning with unaccustomed exertion, burst out of the forest. Across the coastal plain, his young kin stood uncertainly on the beach, letting the Sorrowing Sea lap at his feet.

Immediately before him was the Trap!

K'Tawa raced across the plain, quazing the four Presences as they watched expectantly from the mouth of their cave. He shouted:

"Zu-Bach! Watch out for the Thing That Traps!"

But the other, hearing, only cast a disdainful look at his senior kinsman and started forward.

Then there was a quazable commotion at the mouth of the cave as one of the living Presences—the one who had first impressed K'Tawa as being wholly evil—came running out and waving his arms.

The Old One had almost reached Zu-Bach. But it was too late. For the latter, lurching forward at the sight of the hated Presence, swung an arm in front of him to push the Trap out of his way.

An odd sort of Lightning played all around his hand where it had come into contact with the thing and he toppled forward.

The excited Presence, terrified now, tried to scurry out of the way. But he failed utterly. Zu-Bach's quite ample chest fell full upon the minor creature.

And K'Tawa, pausing in mid-stride to ponder his complete failure at saving his kin, quazed that two living beings, Zu-Bach and one of his tormentors, had both achieved instant and final Spiritual Withdrawal.

THE Old One sat on the sand, head lowered and thoughts saddened. For a long while he had proudly committed himself to personal direction of Zu-Bach's Ascendancy. But now his junior kin would taste not even the pleasures of *First-Phase Contemplation*.

He glanced at the cave. The three remaining Presences had drawn back inside. And the concept of intelligent beings hiding in a cave touched off almost instant Meditation.

All the evidence now being offered by genetic recall pointed to the fact that his ancestors, too, had once lived underground.

But why? Because, came the explanation from a vague source in the far past, if they ventured outside the air would choke them.

The very sky itself, it seemed, had almost—"overnight"?—been filled with suffocating stuff. And there had been other things too—wetness to subdue the dryness, great convulsions of Vastland, total destruction of the day-night dichotomy.

Henceforth, came the unwitting information from his remote forebear, there would be the—Eternal Day.

K'Tawa stirred troublously on the beach. Was that, then, the Great Debacle? Had he had a glimpse of the Awful Disaster?

Despite his fervent search for the answers to those questions, however, his Meditations struck out in their own direction, still drawing from genetic recall:

Quazehornless people in caves. Caves that provided breathable air because their vast underground passages and chambers had been filled with it. Caves

that would sustain the handful of people and some of the animals. The air was still fresh there, but would not be for very long—only a few generations. For it was being forced out of the upper openings by water seeping into the lower passages.

Part of the Debacle?

Yes (came confirmation from the impressions of an "Edu'-Aken," who had lived during one of the cave generations), part of the Debacle—an after part.

Was it related to the Vast Cloud that had come from the Outer Blackness?

But nowhere in K'Tawa's genetic recall heritage was there a ready answer to that question.

Then he dragged himself suddenly up out of Withdrawal. He had quazed return of the minor Presences to the mouth of their cave.

Damned little things! But, then again, perhaps he shouldn't be too intolerably disposed toward them. He saw now that their presence had not been all harmful. It had, by association, suggested new channels for his Quest for Origin and Meaning.

They were much like his remote ancestors must have been, he conceded. But, oh, so different! So malevolent! Even now these three in the cave wanted to destroy, trap, kill, possess.

Still confused, the Old One

headed wearily back toward the village. The others would have to learn Zu-Bach's fate, if they hadn't already quazed it.

* * *

GREEN ventured uncertainly from the cave, stared back over the plain, then returned. "He's gone!"

O'Brien shrugged. "Which leaves us exactly nowhere—unless we managed to buy a little respect for Train Beta when it drops down."

"Poor Wastrom," Yardley said, staring at the fallen giant. "But at least he went out with honor."

"Or," O'Brien added on second thought, "did he?"

"What do you mean?"

"Nothing. Just trying to put a few pieces together."

"Well, when it looked like the giant wasn't going to fall for the trap, Wastrom raced out to lure him on."

Green and O'Brien stared at each other.

"Well, didn't he?" Yardley persisted. "Wasn't that what he said he was going to do when I tried to stop him?"

"Yes, he did," Commander Green admitted. "But—well, he went out there waving his arms, didn't he?"

"And," O'Brien put in, "I got the impression he was trying to work his way around the tractor, rather than keep the tractor

between him and that creature."

"That's what I thought too," Green agreed.

Yardley looked from one to the other. "What do you mean?"

O'Brien frowned. "I'm just wondering: Can you turn a neurosis on and off? Here we had a man obsessed with the fear of death, frightened, whimpering. Can that sort of person go out and destroy himself heroically for a cause?"

"You've got a point," Green observed. "Wastrom could turn it on and off, all right. He wasn't at all neurotic when the Venu-tians first attacked. He was more rational than any of us."

Again, the Commander and O'Brien traded glances. The latter asked, "You thinking what I'm thinking?"

"Possibly. Let's kick it around a bit. Let's go back to the gun. Why did he conceal it from us—unless he had a good, logical reason for us not to know he had it?"

"Preposterous!" Yardley protested. "Are you suggesting he might have wanted to use it on us? If so, why didn't he do it out in space?"

"Because," O'Brien said impulsively, "he didn't have it out there! It would have shown up in deviation in our instruments if he had!"

Green snapped his fingers. "That's right!"

"Then where *did* he get it?" Yardley asked densely.

"It must have been concealed in one of the pieces of equipment we picked up in the Recovery Area."

"But he was never anywhere near any of that equipment Earthside!" Yardley reminded. "It was prepared, assembled and launched hundreds of miles from Canaveral!"

O'Brien nodded. "Which indicates that Wastrom was far from being alone in his enterprise."

Yardley only shook his head incredulously.

"No," Green said. "It wasn't the psych boys who slipped up. It was the security boys."

"His neurosis was all an act then?" the nuclear tech asked.

"A very good one," O'Brien said, impressed. "He knew this operation would be most vulnerable in its earliest stage. Yet, his stake in it was something he had to play by ear. Pretending to be terrified insured tolerance for his 'mistakes.' Until the giants came along, he wasn't at all sure of success, but he was trying."

Green looked up sharply. "The runaway Terrain Walker!"

"There would have been more accidents like that."

"I don't think so. He would have used the gun to simplify matters. But he had probably

just gotten it before the oversized Venutians showed up."

"And when that happened, he lost his gun. But in the Venutians he saw his opportunity to let them accomplish his purpose for him—not only against Alpha, but against Beta and Gamma and anything else we would send over."

Yardley straightened. "But he *shot* the first giant!"

"On impulse. He realized later that the last thing he wanted to do was scare them off. That's why he dropped his neurotic act again and turned hero at the end—so he could save the Venutian while pretending to lead him into the trap."

GREEN went and got three fresh oxygen cylinders and passed them around. "Well, we know how this operation stacks up in the Kremlin's book. Think of the effort they took to plant Wastrom."

O'Brien discarded his empty cylinder and snapped the new one around his waist. He stared down at a serpentine length of high-tension cable that stretched across the dank floor. "I think our final reflection on Wastrom can be one of thanks."

"How so?" Green asked.

"He suggested our logical next step. He was probably right in his idea that we might strike fear into the Venutians and dis-

courage them from attacking Train Beta."

"I don't think the boys in that village will play follow the leader to that rigged tractor—not with one of them bringing the message back."

"No, of course not. So, the thing to do is take the attack to them—before they gang up on us. Frank, that Collard reactor—what's its alternate function?"

Yardley paused. "The plan was that if all the powerplants came through and we needed a nuclear blast for construction purposes, all we'd have to do is goose a Collard up to chain reaction."

"And this one we *will* goose up—after I sling it on the tractor and haul it over to that Venusian village."

Green loosed an exuberant shout. Whooping too, Yardley slapped him on the back.

But then the nuclear technician turned sharply toward O'Brien. "We don't have the radio gear to trigger it off."

"Then it'll have to be done manually."

Yardley was silent a moment. "Right," he said crisply, not broaching the ominous ramifications of the Colonel's statement. "But I'm hauling it over. That's in my department."

"No," Green put in determinedly. "I'm taking it."

O'Brien hesitated, realizing he would only have a more vigorous argument on his hands if he tried to eliminate them on the basis of their family obligations.

"Nobody's playing hero here," he said. "Things are going to be even tougher for you two. You'll have to decide—and within the next twelve hours—who'll be around when Train Beta arrives."

VI

WHEN K'Tawa reached the village he encountered a scene of agitation such as he had not witnessed before. Exemplar L'Jork and five—he counted them twice—five Meditators were awake and active, despite the fact it was sleeptime. Two of them paced beside the Central Slab while the Exemplar and three others held court, with much gesticulation, in front of the Drying Hut.

Rarely had the Old One seen *that* much disquiet. It was evident they had quazed Zu-Bach's tragic death.

L'Jork hurried over to meet him. "I'm afraid we have concerned ourselves excessively with the Spiritual. We should have listened to the boy, shouldn't we?"

"It was a most regrettable Spiritualization," said the Old One. "Poor Zu-Bach."

"Could it have been avoided?" asked Lank-Tro.

"I tried. Perhaps the Exemplar is right. Maybe we should have given Zu-Bach a more receptive ear. But, still—"

"Yes?" L'Jork promoted.

"I don't know. I'm a bit confused."

"Well, *we* aren't." L'Jork faced the others. "Rin'Au, arouse the Prephasers."

"What do you intend doing?" the Old One asked.

"We're going to deal with the living Presences. But first we'll have to send for Prephase help from the other villages."

"And," Lank-Tro added, "we'll also be prepared when the other Presences drop down from the Endlessness."

K'Tawa only stared at the ground, somewhat befuddled.

"You don't approve of the plan?" the Exemplar asked.

"I don't know. L'Jork, I'm fully into Phase Eight Meditation now. And I can't be certain the flow of impressions doesn't point to some sort of deep significance."

"Involving the intruding Presences?"

"Perhaps. But then, again, perhaps not. I'd like to Contemplate more—much more."

L'Jork stared critically at him. "K'Tawa, we respect your Eighth-Phase achievements. But sometimes we won-

der whether you aren't becoming senile in your Meditations. Do you actually expect us to believe that at the very moment you start discovering Meaning concerning small, quazehornless people of the past—at that very moment and by a great coincidence, quazehornless Presences begin making their appearance here?"

"Oh, no. The coincidence would be too farfetched. But it *could* be the other way around. Maybe the appearance of the Presences merely suggested fruitful channels of Contemplation that hadn't occurred to anyone before."

Rin'Au asked, "What do you advise—about the Presences?"

"I advise nothing. All I'd like to do is Meditate some more."

"You can Meditate all you want," the Exemplar said stiffly. "But I've already decided what has to be done."

K'Tawa quazed that the decision involved precipitous action against the Presences as soon as the Prephasers could be assembled. Nevertheless, he returned to his hut and anxiously distorted his complaining limbs into Cogitative Posture.

Sadly, he realized that all the evidence, fragmentary though it might be, pointed urgently to the Great Debacle as the paramount modifier of Meaning. But for recall after recall, now, he

had thrust only along the fringe of the Calamity. He had indeed thrown much illumination on his Quest for Significance. But whatever he had recalled had been so confusing that he was unable to wring any comprehension from it.

Perhaps a period of Meditative review was in order. From the reassessment of inherent memories might come understanding, or at least a more Meaningful order.

THERE had been day and night, of that he was certain. Night spawned out of the Endless Blackness. And quazehornless people who were incredibly knowledgeable, who had lived in huge collections of shining structures on Vastland and had known about other The worlds.

And out there in the Upper Endlessness had been a huge, shimmering Cloud, turning back part of the Blackness. Only, it *hadn't* been a Cloud, as he normally entertained the concept. It had been composed of—(he coaxed himself) composed of—

The source from which the answer came was as obscure as the information itself was Meaningless. At any rate, it appeared that the vast, wispy Cloud had been made up of hard-like-stone pieces of water, countless numbers of them. And something else: "solid"—?—poison-

ous air. No, not quite. But it *had* been hard and, when warmed, it would turn into first choking, then nonchoking air.

K'Tawa paused in Contemplation. Why "choking" then "non-choking"? How could the air quit being of the one nature and start being of the other? It was beyond comprehension, unless—unless the change had been in the *breather* rather than in the *breathed*!

He tried to pursue the recollection. But, somehow, he sensed he had gone up a blind channel. Then, from a wholly new direction came—*something*. Straining, he forced an element of identity from the impression that was trying to break through.

There had been a—"Fos-Batl"?—who had lived during one of the early cave generations, just after the Great Dabacle.

And from that observant individual came fascinating mind-images. Of frightened people massed at the very mouth of a cavern, the gentle flow of fresh air, trapped for generations, passing reassuringly around their bodies. And, in front of them, so close that they could step easily across it, was the line-of-farthest-advance-without-suffocation.

Outside was the poisonous air, it seemed. And inside was the—

"fresh"?—air. There was much confusion here. And K'Tawa was certain that somewhere along the way Meanings had been swapped. What had once been "stale" or "poisonous" was now "fresh." But he sloughed off the temptation to become involved in semantics. And he sought a closer togetherness with Fos-Batl and the bequeathed memories.

The Old One watched, entranced, as some of the people gathered huge see-through len-thral bags that grew underground. Inflating them, they tied the openings securely about their necks. (The living Presences too, he realized suddenly, used see-through bags of a sort!) This apparently provided portable fresh air and made it possible for the people to stay out of the cave long enough to gather food from the plants for themselves and the animals.

Fos-Batl's contribution to Meaning faded before yet another identity that seemed to tug for K'Tawa's attention. Now he opened his mind to Bel-Uri, of a later cave generation. He noted the young woman's sadness and loneliness as she watched her toddling son play just beyond the line-of-farthest-advance-without-suffocation.

She was heavy-hearted because she knew her progeny was a poisonous air-breather. And

he would live on the invisible boundary line only until he had gone through sufficient Physical Ascendancy to strike out on his own. Then he would join the handful of people and animals that had already crossed over.

The point of Meaning here seemed evident: With infinite mercy, Providence had gradually given the people the ability to breathe the new kind of air that the Cloud from the Blackness had brought. Just as, later, that same Providence had provided quazehorns.

He tried to penetrate even deeper into the mainstream of ancestral memory. But the impressions came too rapidly to be orderly, and they were too vague for useful comprehension.

"K'Tawa, wake up and quaze toward the coastal plain!"

The Old One reluctantly returned from Withdrawal and opened his eyes to see L'Jork standing anxiously above him.

The Exemplar pointed. "Quaze out that way, quickly!"

And K'Tawa took in the approach of the living Presence on the Thing That Crawled. Too, he sensed the Awful Danger the little one was bringing.

* * *

STEERING the tractor through a field of strewn boulders, Colonel O'Brien finally left the coastal plain and headed into the forest. Suspended on

the crane ahead of him, the Mark IV Collard reactor, damped into silence, swung ponderously with the lurching motions of the vehicle.

"All right, Scott—I can't see you any longer," came Commander Green's voice over the comsystem. "You're on your own."

"Straight into the woods?"

"As straight as you can go. Soon you'll see a small stream—"

"Crossing it now."

"And then, on the other side, a lot of short, thin trees with leaves that look like black cobwebs."

"Roger. I'm in them." O'Brien used a dripping hand to wipe an accumulation of raindrops off his respirahood. "There's a channel through them that looks pretty well trampled."

"That's it. Just follow it on. And, Scott—keep in touch."

"Right."

The tractor's right tread dropped into a depression and the Collard reactor jerked over in that direction, coming down hard on its suspension cable. O'Brien couldn't understand why the line hadn't snapped. He decreased speed markedly.

He glanced up at the black, rolling sky and watched several bolts crash down into the forest. But soon the torrential rain was obscuring even the lightning.

That, however, was to his advantage, he assured himself. In an Earthside environment, this sort of operation would be carried out under the cover of blackest night. But with Venus' eternal day, the next best thing was a severe rainstorm to add to the murkiness. That the chance of taking a bolt broadside had also increased was, of course, an added complication.

"Frank?" he called.

"Yes?" Yardley's answer was instant.

"You sure you've got this thing rigged up right? It's our only shot. I wouldn't want to blow it."

"She'll go," the nuclear tech promised. "All you have to do is touch the free wire to the negative pole of your battery. Everything else'll take care of itself."

O'Brien squinted through the rain, checking the twin leads that rose along the suspension cable, curved in and out of the boom's bracework and dangled down beside the seat. One lead was already grounded on the steering column. The other, well wrapped in makeshift insulation, lay beside the open battery box, anchored there with a piece of plastic cord.

AGAIN his hood had become almost opaque from perspiration within and the pelting rain without. He removed it and

pulled out his shirt tail. While he gave the hood a thorough wiping, he breathed slowly at first, then gaspingly. Venus' air went in and out without any difficulty. But the "trace" of oxygen was too pitifully inadequate for starved capillaries.

Swiping the tepid rain from his face, he lowered the hood once more. He imagined he was a bit more comfortable—but only immeasurably so, what with carbonated water and sweat pasting his clothes against his body.

"Getting anywhere, Scott?" Green asked.

"I've left the saplings—if that's what they were—behind now. Going into some pretty stout timber."

"Just push on straight ahead."

"Which way is straight ahead?"

"You should see a swamp off to your right."

"Roger."

"Beyond that and a bit off to the left there should be a hill."

O'Brien peered past the swinging Collard reactor. "I can just make it out. The rain's letting up. A hill with no trees on top?"

"That's it. From the crest you'll see the village."

"Good enough."

The Colonel took his attention momentarily off the swinging

powerplant and glanced up at the trees—crazy, grotesque things that reared somberly into the Venusian twilight for perhaps fifty feet or so, then broke out into a ridiculous pattern of twisted branches and impossible foliage.

Only vegetation like *that*, he reflected, could be expected to exist on this kind of a world. It was undoubtedly efficient in separating what little oxygen there was from the Venusian atmosphere. But when it got through taking care of its biochemical needs, there was none left to discharge into the air.

Suddenly Yardley was back on the comsystem. "Scott, I can't let you go through with this—not when there's a way out!"

O'Brien sighed. "I was hoping you wouldn't discover the way out for at least another fifteen or twenty minutes."

"You *know*?"

"Yes, I thought of it. But getting this job done is more important. If we're talking about the same solution, you'll know it was a matter of 'either-or'."

"Yes, I see that now," Yardley acknowledged listlessly. "And I suppose you're right. Getting rid of that nest of Venutians as quickly as possible is more important."

Commander Green's puzzled voice erupted. "How's about letting *me* in on this?"

"Well, we could have blocked off a small section of the cave," O'Brien explained. "With all the juice this Collard puts out, it wouldn't have been too hard to set up some sort of electrolytic process. It probably wouldn't have given off a lot of oxygen—but maybe enough to keep us going."

"Sounds great! We could hibernate here until just before Train Beta's ETA, then rig up the attack deal you've got going now." But exuberance faded from the Commander's voice as he spoke.

"Yes?" O'Brien encouraged.

"Oh, I see. That would give the Venutians four days to figure out some way of smoking us into the open. And then we might not have a shot at their nest before Beta arrives."

THE Colonel crested the hill and pulled the tractor to a halt. Ahead, the forest thinned out on the downslope. And perhaps half a mile off was the village—a disarray of huge, clumsy huts of no apparent standard shape or formal design.

Then he tensed. Four huge Venutians, all carrying stone-tipped spears, were lumbering up the hill. A fifth, lean and slower in his stride, followed. O'Brien recognized him as the one who had twice been to the Alpha Base site.

He started the tractor forward at full speed. "This is it," he said calmly into his throat microphone. "There's a counter-attack shaping up below. But I'm going to try and crash through to their nest."

"What if you get hemmed in before you reach the village?" Yardley asked.

"I'll let it blow right here. We'll get at least five of them. And the blast should have some effect on the village."

He skirted around a tree, half skidded into a ravine and lumbered out again, then broke into an open stretch.

The four giants had mounted a violent charge. But the fifth was acting as oddly as he had after the death of his companion on the beach. He had seated himself, crossed his arms and legs and bowed his head until touching the ground.

O'Brien unsheathed the negative lead to the Collard reactor and held it in readiness above the battery box.

But while he had taken his eyes off the Venutians, he hadn't noticed that the branch of a scrub tree had gotten caught in the crane's suspension cable.

The tractor's forward momentum had bent the bough like a bow by the time he saw what had happened. Desperately, he tried to brake his speed. But it was too late.

The branch slipped free and lashed back, catching him full in the chest and catapulting him from the seat.

Stunned, he struggled up and staggered after the vehicle. But he hesitated, realizing that many things were horribly wrong.

The tractor, trailing the negative lead that was to have set off the Collard's chain reaction, was going too fast for him to overtake it.

Furiously, the giants were bearing down on him.

And his lungs were convulsing from lack of oxygen.

As he slumped, suffocating, to the ground, he saw the reason for the latter complication.

His respirahood—oxygen cylinder and all—had been hurled into the tree and was caught on a branch twenty feet over his head.

VII

COMMANDER Green paced the beach near the cave while Yardley sat staring at the forest.

"It's no use," the latter said dejectedly. "It's been over three hours. He would have set it off by now."

"What do you suppose happened?"

"With him out of radio con-

tact, we can only assume the worst."

Green leaned against a boulder and glanced down at the gauge on his oxygen cylinder. It showed only a couple of hours' supply left. He wondered if the nuclear technician, too, was aware that their cut-off point was only two hours away. At that time, there would be fresh oxygen—but only for the one who would hang on to warn Train Beta.

Nervously, Yardley scooped up a handful of wet sand, tossed it into the air, caught it and hurled it seaward. Then he disappeared into the cave.

Green stared at the entrance, shifting his gaze alternately to the forest. He knelt on the beach. With a stiff finger, he inscribed in large letters on the moist sand:

"I won't be back. Carry on. Tell Beta hello for me."

Purposely, he snapped off his personal transceiver so he wouldn't have to put up with any argument. Then he struck off inland.

* * *

EXEMPLAR L'Jork and Meditators Rin-Au and Lank-Tro sat around staring uncertainly at one another in the overcrowded confines of K'Tawa's hut. Occasionally they cast impatient glances at the Old One, who was

coiled up in Cogitative Posture against the wall—motionless, unbreathing, deep in Withdrawal.

"I must admit," Lank-Tro complained, "that I don't know what's going on."

"K'Tawa's Meditating," the Exemplar said evenly.

"Yes, I know. But why did he want us all in here with him? And why was he so explicit in his insistence that we *not* Meditate?"

"Because he wanted us to stay awake."

"But if we were Withdrawn, it wouldn't be so stuffy in here."

"He tried to explain, but I didn't understand. He was in such a hurry to return to Contemplation."

Rin'Au betrayed his own confusion. "What's he Meditating on?"

"Ultimate Meaning, I believe he said."

Rin'Au glanced unappreciatively around him. "I don't like it—catering to the whim of an old one. I—"

Lank-Tro sat up sharply and aimed his horn in the direction of the hut's south wall.

"I quaze it too," L'Jork spoke out, "—another little Presence making his way through the forest."

"I don't quaze any danger."

"No, but he must be attended to nevertheless."

"I'll get some of the Prephasers to take care of him in the same manner K'Tawa took care of the other intruder."

The Exemplar went out of the hut and returned—all in the space of but a short while.

"Can we be sure there is no longer any danger from the Thing That Crawls?" Rin'Au asked after L'Jork had again seated himself.

"Absolutely. K'Tawa personally gave it a good quazing. Then he did what had to be done to deprive it of its hazardous potential. Anyway, he had it removed from the immediate area."

Silence claimed the hut as the three Meditators quazed clearly that the bold living Presence who had been advancing on the village was properly taken care of by the Prephasers.

There was much shrill shouting for a while, of course. But what could the little one do against the grip of hands that were so huge, relative to his own?

Later, when the see-through covering was snatched from his head, there was such a commotion that the Meditators were led to declare they had never quazed such fright.

THEN K'Tawa stirred and all eyes turned expectantly on him. He disengaged himself

from cogitative Posture and took his time going through the Prescribed Exercises.

Finally J'Jork could wait no longer. "Was your Contemplative Quest as successful as you thought it would be?"

"Even more so." The Old One's eyes were full of wonder and respect, as though they had beheld nothing less than Total Revelation. "Did you dispatch the Prephasers?"

"They are on their way and should be nearing the cave by now."

Lank-Tro added, "But only one of the Presences is still there. The other—"

"Yes, I quazed what happened."

"Your Meditations, K'Tawa," the Exemplar begged, "*—what* did you learn?"

"I might not have learned anything if the direct sight of the little Presence gasping for stale air out there on the hillside hadn't suggested the final direction of Meditation."

"But what *did* you learn?"

"The Meanings of a vast Cloud in the Blackness, of another The World, of air that suffocates, of the Great Debacle, of a distant quazehornless one—not an ancestor, because he established a divergent, independent lineage—one who built a huge ship, of —"

"Get to the point, Old One,"

L'Jork urged. "If you *have* achieved full Eighth-Phase Ascendancy, I should imagine that Origin and Meaning would come through much more coherently."

"The incoherence is in the relating, not in the understanding."

"Who was this quazehornless ship builder?" Rin'Au asked.

But the Old One had decided upon his approach. "Imagine a great Cloud coming out of the Darkness far from Onlyland—rather, Vastland. The Cloud is shaped like a spearhead. The people *see* it and are afraid, for there are no Perpetual Clouds in the way.

"This thing from the Outer Blackness passes close to The World. It leaves part of itself to settle down into the air. It dumps much water into and through the air—enough to coyer practically everything except what we now know as Onlyland. The influence of the Cloud itself, followed by the almost instant grip of water on land, makes the Day Eternal."

K'Tawa pinched the bridge of his nose, as though to coax out more of the things he had recalled.

"Even before the vast Cloud arrives, though," he went on thoughtfully, "the builder of the ship—I have yet to remember his name—gathers about him a

handful of frightened people and loads them aboard his great vessel,"

"Where did they go?" L'Jork asked, interested.

"To another The World—the one that was, rather is closest to what our ancestors called their The World. In that way, the builder established his independent lineage."

"And *our own* lineage?"

"It derives from the remnants of those who stayed behind—stayed behind and acquired quazehorns and grew in size and learned to avail themselves of ancestral impressions and—oh, yes, I almost forgot: You see, this vast Cloud from the Outer Blackness also brought with it practically all the air that exists today. But it was air that our ancestors couldn't breathe."

Link-Tro frowned dubiously. "If *they* couldn't breathe it, how is it that *we* can?"

"Somewhere along the way we *learned* to breathe it. Rather, we underwent changes that *enabled* us to breathe it."

L'JORK stared across the hut. "But you said all this had something to do with the little intruding Presences."

"It does. Those Presences descended from the ship builder."

"You mean they are covered by the Code of Kinship?"

K'Tawa nodded soberly.

"I won't believe that, although I know you couldn't consciously falsify. If they are Kin, then why did they kill Zu-Bach?"

"We overlook one thing. Zu-Bach tried to kill them first. Anyway, they must have lost their knowledge of Origin and Meaning, just as we did—although they seem to have climbed back closer to the level of our common ancestors than we have."

K'Tawa bowed his head, only now beginning to appreciate the significance and impact of the Revelations. Kinship had, in a manner of speaking, been actively re-established. And, even from the constricted vantage of the present, the Old One could quaze that life would soon be unrecognizably different for the Onlylanders.

There would perhaps be not as much stress on the Spiritual, much more on the Material. And there would come the time when the Onlylanders, too, would use the great, shining instruments of the intruders and themselves wander into the Outer Blackness.

L'Jork broke the silence. "What about the stale-fresh air?"

"That was the most difficult of all to comprehend. And, when it finally came as I Meditated

briefly on the hillside, it didn't all come from ancestral impressions. Part of it I quazed from the sight of the little Presence gasping for breath beneath the tree."

"What *about* the stale-fresh air?" the Exemplar prodded, trying to guide him more directly to the point.

"It's simple now. We learned to breathe the new air that the vast Cloud from the Upper Blackness brought. When we did, we also started breathing *out* the kind of air that the little Presences must breathe *in*."

K'Tawa glanced sympathetically, almost affectionately at the small Presence who still slept on the floor of the hut. He hadn't moved since he had been placed there.

The Old One quazed L'Jork and the two other Meditators. Now they understood. And they didn't mind that they had to sit around in a stuffy hut so that the little one might not suffocate.

* * *

WITH the distant booming of thunder still fresh in his ears, awareness gradually returned to Colonel O'Brien. Sensing an underlying inconsistency, he lay there without moving.

Then he tensed with the suspicion that it might not have been thunder at all. It had been

too regular, modulated by a cadence that was all too suggestive of—

Abruptly his mind was aswirl with vivid, harrowing recollections of gigantic Venutians bearing down on him, of his respiragear caught irretrievably in the tree, of himself suffocating in the Venusian sea of carbon dioxide and nitrogen.

Confounded, he lay still and cautiously flicked an eyelid open.

Right there in his immediate field of vision was a naked foot fully the length of his arm!

With the motion of but a single eye, he traced the ankle to the massive calf and followed the limb on up to its ponderous kneecap.

The leg moved slightly and, instantly, O'Brien snapped his eyelid shut. Thank God, he reflected, that he had had the presence of mind to remain absolutely motionless! At least, he might hope for the advantage of surprise.

Something that felt like a log came out and prodded his shoulder—but not roughly. The giant *knew* he was awake! Nevertheless, he stayed rigid—until—

He lurched into a sitting position and his hands shot up to explore his face.

No hood! Here—in this Venusian hut, apparently—he was breathing normally, comfortably without *respiragear*!

His astonishment retreated before burgeoning fear as the nearest Venutian—there were four of them, he saw now—dropped anxiously to his hands and knees and advanced.

The creature was the one who had been on the beach. And he was smiling. But O'Brien couldn't tell whether it was an expression of malicious anticipation or amusement or something else entirely.

He cowered against the wall and dodged the great, sharp horn when he found it poised above him. Then the huge head came within inches of his own, pulled in a mighty lungful of air and—*blew it out gently into his face!*

It was pure, fresh—like the exhilarating afterbreath of an Earthside thunderstorm!

The other Venutians watched as the first repeated the action, then went back to join them.

O'BRIEN only sat there paralyzed with astonishment. But perhaps it *wasn't* so incredible after all. In a metabolism based on the formation of carbon-nitrogen bonds, the carbon dioxide would have to be reduced—in a process analogous to photosynthesis, perhaps—so that carbon would be available for molecular combination. As a result, the left-over oxygen might be discharged from the system!

He was suddenly aware of the pressure of the microphone against his throat when he heard the earphone's diaphragm vibrating tinnily in the silence. Retrieving the latter instrument as it dangled from his waistband, he positioned it in place. Yardley was shouting, "Green, where are you? Come back! Something's happened!"

O'Brien answered, "Yardley, what is it? Where are you?"

"Scott! Good God, but you *can't* be alive!"

"I'm here in the village—with the Venutians."

"*What?*" There was utter disbelief in the nuclear tech's response. "But your oxygen gave out hours ago!"

"Apparently I don't need any—not here, at least. What—"

A third voice broke in on the comsystem. "Scott! Is that you—*here in the village?*" Green demanded.

"Yes, you see, I—what do you mean—*here* in the village?"

"That's where I am. I got jumped in the forest and they took me into one of their huts and relieved me of my hood and —"

"And you aren't having any trouble breathing."

"No, of course not. You aren't either. Why?"

"There're a few Venutians in there with you?"

"Three."

"As I thought," O'Brien disclosed.

"You *know* what's going on?"

"I think so. I'll explain later."

One of the Venutians, the same one, had come forward again—but still not threateningly. He looked up occasionally and smiled as he traced designs on the hut's soft-mud floor.

Yardley finally broke in. "Well I wish somebody would explain it to *me*. About half an hour ago three Venutians showed up on the beach. One was dragging the tractor-crane and the Mark IV reactor. Another had our standby Del Rouad transceiver capsule. The third brought the backup cap with all the reserve O₂ cylinders. I don't know where they got them, but the stuff is all in front of the cave now."

"In which case," O'Brien said smugly, "you might mount the tractor, drop the Collard power-plant and come pick us up. And, oh yes, you'll find some spare respirahoods packed in with the O₂ cylinders. Bring a couple along."

The now obviously friendly Venutian had finished his sketch. He stepped back and

proudly gestured toward it.

He had thumbed a large depression in the floor and drawn three concentric circles around it. In each circle he had thumbed another indentation. He touched the second largest circle and spread his arm all-inclusively around him. Then he touched the largest and pointed to O'Brien.

It was evident that these Venutians, their gaze forever obscured by an eternally unbroken cloud cover, somehow had access to knowledge beyond their apparent reach. "How," O'Brien decided, would have to be explained later—as would their humanoid forms and their sudden reversal in temperament.

"Scott," Green said, "there's a lot we have to learn about these natives."

"An awful lot. And I think we're going to run into a few surprises along the way."

"What about Train Beta?" Yardley wanted to know.

"Come pick us up and we'll set up the Del Rouad so we can contact them. We ought to let them know that everything's positive in the Recovery Area."

THE END



ARTHUR C. CLARKE

By SAM MOSKOWITZ

AMONG science fiction writers who have gained their eminence since 1940, Ray Bradbury is possibly the only one as familiar to the general public as Arthur C. Clarke. This is a popularity that has been rewarded in terms of economics as well as prestige. Clarke's 1961 novel, *A Fall of Moondust*, achieved the unprecedented distinction of being the first interplanetary story ever used in READER'S DIGEST CONDENSED BOOK LIBRARY. Yet it is doubtful if it would ever have been considered were it not for the fact that Clarke had nine years previously enjoyed a BOOK-OF-THE-MONTH-CLUB choice (July, 1952) for an exposition of popular science titled *The Exploration of Space*.

This gave Clarke literary status. Book publishers who had previously ignored his fiction were now delighted to feature it on their lists. Not only did Clarke's science fiction receive lead reviews, but they were evaluated as *serious* efforts. *A Fall of Moondust* was possibly the most profitable of all Clarke's

works of fiction, but his standing as an important writer was established when THE NEW YORK TIMES and other highly regarded sources of literary criticism gave lead and praise-saturated reviews to the Stapledonian concepts in his *Childhood's End* published by Ballantine Books in 1953.

IT is relatively common for a leading fiction writer to shift into non-fiction and be received with enthusiasm. It is far less common for even a top figure in non-fiction to move on to wider recognition in the realm of romantic make-believe.

This is the background of Clarke's achievement.

Almost as far back as the family tree could be traced, all of the Clarke family had been farmers. When Arthur was born on Dec. 16, 1917, on a farm in Minehead, Somerset, England, it was reasonable to suppose he would follow in the tradition of his ancestors. But when he was 10 his father gave him a series of cigarette cards of prehistoric

animals. Young Arthur went quietly mad on the subject of paleontology, collecting fossils at a furious rate. Before Arthur was 12 his father had died and his mother had to struggle to keep the farm going and her son in school. She received small help from the boy, whose interest shifted from paleontology to astronomy. To implement this switch he constructed his own telescopes out of old Meccano parts. Alexander Graham Bell, inventor of the telephone, had also patented the photophone, a device by which sound waves vibrated a beam of reflected sunlight and the receiver changed the varying light intensity back into sound. Clarke built his own photophone transmitter from a bicycle beam, and also played with audio modulation of sunlight by mechanical means. And in 1927 Clarke discovered AMAZING STORIES.

He must have seemed a strange teenager to fellow students of Huish's Grammar School in Taunton. By his 15th birthday he was writing fantasies for the school paper and making his mark as an assistant editor. As early as that it was obvious that all his life he would be torn between the fascinating realities of science and the siren's call of imaginative day dreams.

Today, with both the Ameri-

can Rocket Society and The British Interplanetary Society respected scientific institutions, and recognized factors in the advancement of research through their handsome journals, it has been forgotten they were *both* launched by science fiction editors, writers and readers. The former was pioneered by David Lasser, editor of WONDER STORIES, in New York on March 21, 1930. The British Interplanetary Society was founded by P. E. Cleater, a science fiction enthusiast, in October, 1933 in Liverpool, England. Clarke discovered the existence of the English organization through science fiction correspondents and joined it during the Summer of 1934 as an associate member. This seemingly simple act was to develop into the most profound and far-reaching decision of his life!

WITHOUT the money for higher education, Clarke took a civil service examination for a position as auditor in His Majesty's Exchequer and Audit Department. It was the depression; openings were scarce. Over 1500 people competed for the positions available, and Clarke, who came out 26th in ratings, managed to secure a post in London. He moved to that city in 1936 and rented a room in a house at Norfolk 2, so

tiny that it became the standing joke of his acquaintances. When he entertained a visitor, he had to open the window and sit partly outside the room; otherwise there wasn't any space for the two of them and the bed. The alternative was to leave the door open and have one party sit in the hall.

A London Branch of the British Interplanetary Society was formed Oct. 27, 1936, at the offices of Prof. A. M. Low, 8 Waterloo Place, Piccadilly. Low was a respected inventor and the editor of *ARMCHAIR SCIENCE* as well as the author of a number of books of popular science and juvenile fantasies. Behind this move was a desire to shift BIS headquarters to London. Arthur Clarke was made treasurer of the Society and began actively to work for the group.

Earlier, he had begun writing for the British science fiction fan magazine *NOVAE TERRAE*, a mimeographed, quarto-sized publication which was the official organ of The Science Fiction Organization. In his article *Science Fiction—Past, Present and Future* (June, 1937) he stressed the importance of accurate science about rocketry in science fiction magazines, since most of the BIS membership was recruited from the ranks of their readers. In the same magazine he championed for excellent

science with good writing in a literary debate on the essentials of science fiction with C. S. Youd, who was to become renowned as John Christopher, author of *No Blade of Grass*.

Clarke joined forces with Maurice K. Janson, editor of *NOVAE TERRAE* and William F. Temple (eventually to become a prominent science fiction author) and rented an apartment at 88 Gray's Inn Road, W.C. 1. The magazine was mimeographed there and the science fiction club used the apartment as a weekly informal meeting place. Club activities both in rocketry and science fiction helped Clarke come in contact with people who could help him in a writing career.

The first money he received from writing was from Eric Frank Russell, then a 32-year-old commercial traveler, residing in Liverpool, who had recently sold a number of stories to *ASTOUNDING STORIES*. Russell, a fellow member of the British Interplanetary Society, utilized some ideas supplied him by Clarke in a science fiction story he sold and turned part of the proceeds of the sale over to the young aspirant. Even more important was Clarke's association with Walter Gillings, the leading science fiction fan in Britain during the '30's and publisher of a fan magazine titled *SCIENTIFIC-TION*. Gillings had been driving

hard to convince British publishers to issue a science fiction periodical and after many failures had convinced Worlds Work (1913) Ltd. that they should try a one-shot, TALES OF WONDER, with Gillings as editor.

Gillings purchased from Arthur C. Clarke two articles. The first, *Man's Empire of Tomorrow* (Winter, 1938) was a smoothly written astronomical rehash of what was known about the planets of the solar system. The second, *We Can Rocket to the Moon—Now!* (Summer, 1939) championed the practicality of space flight. Clarke was now a professional writer.

CLARKE was secretly working on a novel which would eventually solidify in 1946 as *Against the Fall of Night*, but during this period his only other ventures into fiction were two trivial efforts, *How We Went to Mars* and *Retreat From Earth*, both appearing in the March, 1938 issue of AMATEUR SCIENCE STORIES, a legal-sized mimeographed fan magazine edited by Douglas W. F. Mayer and published under the auspices of The Science Fiction Association to encourage budding British writers. Important to the direction of his future was the appearance of his first technical article in THE JOURNAL OF THE BRITISH INTERPLANETARY SOCIETY for

Jan., 1939, titled *An Elementary Mathematical Approach to Astronautics*. It dealt with the problems of determining ratios of combustion of fuel to mass of the rocket as related to velocity.

C. S. Yould's (John Christopher's) publication THE FANTAST, in its inaugural issue (April, 1939), featured a long poem by Clarke, *The Twilight of the Sun*, which ended with the lines:

*"The Intellect, pure, unalloyed, on
courage
eternally buoyed,
Will span the vast gulfs of the
void and win
a new planet's fair face.
For one day our vessels will ply
to the uttermost
depths of the sky,
And in them at last we shall fly,
ere the darkness
sweeps over our race."*

Modesty was not one of Clarke's youthful virtues and his nickname everywhere in the amateur publications was "Ego". After a while it became so much a part of him that he began to byline his articles Arthur Ego Clarke instead of Arthur C. Clarke.

Clarke entered the Royal Air Force in 1941 and remained until 1946. He started as a radio technician and rose to flight lieutenant. His scientific interests and aptitudes now stood him in good stead, since he was involved as a technical officer on

the first experimental trials of Ground Controlled Approach Radar. While in the RAF he began writing again. A technical paper on time-base circuits appeared in WIRELESS ENGINEER. But more important was *Extra-Terrestrial Relays* in WIRELESS WORLD for Oct., 1945, in which he proposed three earth satellites in orbit for global television. This may have been the first serious prediction of the concept and Clarke later (Rogue, Nov., 1962) indulged in self-recriminations for not attempting to patent the idea. At the end of the war he won first prize in RAF QUARTERLY for his essay *The Rocket and the Future of Warfare*, involving the wedding of atomic warheads and rockets.

MAJOR credit for reviving The British Interplanetary Society after World War II belongs to Clarke. He strenuously set about drawing other rocket societies under the aegis of the BIS. Early in 1946 the BIS resumed operations and the same year Clarke was elected Chairman of the Society in recognition of his services. These services transcended the mere organizational, for he enrolled George Bernard Shaw as an enthusiastic member. Shaw had voluntarily joined when he was sent (and read) Clarke's *The Challenge of the Spaceship* pub-

lished in the Dec., 1946 issue of THE JOURNAL OF THE BRITISH INTERPLANETARY SOCIETY. The article delineated the scientific and philosophical reasons for space travel. It was collected as the title essay of a book of related articles published by Ballantine in 1961.

With the end of the war, the British publishing industry struggled to return to normal. Edward John Carnell, a leading scientifi-fictionist who had once guest-edited the Dec., 1937 issue of THE JOURNAL OF THE BRITISH INTERPLANETARY SOCIETY, talked Pendulum Publications into issuing NEW WORLDS. At the same time, Walter Gillings convinced The Temple Bar Publishing Co., London, to try a similar venture titled FANTASY. Clarke found his old friend E. J. Carnell receptive to the use of *Inheritance* for the third issue of NEW WORLDS, published undated as Number 3 in 1946. Dealing with precognition and a son destined to fulfill his father's vision, the story did not merit publication, yet Clarke managed to sell it again to ASTOUNDING SCIENCE FICTION where it appeared in the September, 1948, issue.

Clarke began submitting to ASTOUNDING SCIENCE-FICTION, clicking with John W. Campbell with a short story titled *Loop-hole*, which appeared in the April, 1946 issue. This proved a

weak effort involving Martians who forcibly quarantine earth by forbidding use of space ships, and then are beaten when interplanetary matter transmitters are devised and their wards turn up in their own back yard.

By contrast, *Rescue Party*, published in the following May, 1946, number provided taut, fascinating suspense as an alien space ship attempts to explore earth's vacated cities in just seven hours before the sun will explode into a nova. In this short story, two major influences on Clarke are instantly apparent: John W. Campbell, in the Don A. Stuart vein creating a mood of sympathy and admiration for the creations of man and the faithful machines that have served him; and Olaf Stapledon, whose intellectual grandeur sent the imagination racing to the limits of time and space. Suspense in *Rescue Party* is created by the intellectual presentation of the problems and *not* by stylistic rendition. In method, Clarke acted in this story and most of his future stories as the observer or historian and never as the participant. The reward for reading concentration is a surprise ending. *Rescue Party* proved a matter of chagrin to Clarke because its popularity and frequent reprintings implied that he had improved little over the years.

Gillings finally cleared post-war paper shortage hurdles and got the first issue of FANTASY out with the date line Dec., 1946, carrying Clarke's story *Technical Error*. The plot concerned a power house accident in which a technician's body is reversed like a mirror image and as a result he is unable to absorb nutrition from his food. In an attempt to restore him by repeating the accident, the entire installation is destroyed. The story required reader concentration, but it won first place in reader approval in the issue and four years later was reprinted in the U.S. by THRILLING WONDER STORIES (June, 1950) as *The Reversed Man*.

FANTASY only ran two more issues and Clarke had a story in each under a pen name, because he considered the efforts too inferior to dignify with his own by-line. He used Charles Willis for *Castaway* in the April, 1947, issue, a mood piece where navigators on an airliner obtain a glimpse of a strange and awesome life form that has been blasted free of the sun and is dying in the "frigid" clutch of the earth. Nothing else happens but Clarke successfully conveys the wonder and the tragedy of that brief encounter. *The Fires Within*, published under the name of E. G. O'Brien in the August, 1947 and final issue of

FANTASY (printed in the U.S. in the September, 1949 STARTLING STORIES) was one of Clarke's most successful shorts. The discovery and emergence of a high-density race of creatures underground inadvertently destroys all surface life, leaving the subterranean race conscience-stricken.

THROUGH the auspices of a member of Parliament, Clarke as a war veteran was subsidized by the government at Kings College, London. In two years he obtained a First Class Honors B.S. in physics as well as pure and applied mathematics. He entered school in October, 1946, and graduated in 1948. Little appeared by him during these two years but he finally saw published *Against the Fall of Night* in the Nov., 1948 STARTLING STORIES, a novel regarded as one of his key works. It was begun in 1937 and, after five revisions, completed in 1946. It had been turned down by Campbell, who probably was instantly aware that this novel had been intended as a prelude to his own stories *Twilight* and *Night*, published in 1934 and 1935.

What Clarke has done in this novel of a determined boy who frees a moribund civilization of its ennui and gives it back the stars, is to explore in additional

detail the intriguing implications of Campbell's *Twilight*, to create a mood in the fashion of Clark Ashton Smith and to zero in to a climax on the ideas of Olaf Stapledon. Clarke essentially changed nothing when he expanded the novel to *The City and the Stars* in 1956.

In looking at the genesis of his particular story, it becomes obvious that Clarke is one and apart from today's body of science fiction. It is as if Robert Heinlein, A. E. van Vogt, Theodore Sturgeon, Isaac Asimov, Ray Bradbury, and the entire crew of "moderns" had never existed. He owes nothing to them and has derived nothing from them. His roots go back before 1938; his method has evolved from that older body of science fiction.

AFTER college Clarke got a job, in 1949, on the staff of the Institution of Electrical Engineers as assistant editor of SCIENCE ABSTRACTS. This kept him abreast of the latest developments in science and gave him time to step up his writing schedule. *History Lesson*, published in the May, 1949 STARTLING STORIES evolved from the same basic idea as *Rescue Party*, but took a different direction. Here, Venusians land on earth after human life has been destroyed by a new ice age and

they judge the life and inhabitants of the planet solely by an old Donald Duck cartoon they find.

The Wall of Darkness, which appeared in the July, 1949, SUPER SCIENCE STORIES is beyond doubt one of Clarke's finest short stories. Related in the manner of Lord Dunsany, it tells of a far-off world at the edge of the universe, completely split by a gigantic wall, a wall with only one side like a Mobius strip. It is an original and beautifully written story which deserves far more attention than it has received.

Of particular significance was *Hide and Seek* which appeared in the Sept., 1949 ASTOUNDING SCIENCE-FICTION. This short story is built around the problem of a man in a space suit on the Martian moon Phobos who must keep alive and out of sight of an armed space cruiser until help arrives. How he does it is the story. This is known as the "scientific problem" yarn. Put the character into a difficult situation that can only be solved by legitimate scientific reasoning. This approach eventually leads to Clarke's *Fall of Moon Dust*, where the problem of finding a ship in a sea of sand, and of surfacing its occupants, forms a puzzle to build suspense around.

In 1950 Clarke slightly

changed direction. He wrote a short book, *Interplanetary Flight, An Introduction To Astronautics*. Despite the fact that it was mildly technical, it sold well enough to warrant distribution in the United States by Harper. This led to the suggestion that he try a longer, more ambitious work. He began research on *The Exploration of Space*.

Prelude to Space, an ambling novel of the preparation for the first trip to the moon written in the summer of 1947, appeared in GALAXY SCIENCE FICTION NOVELS in 1951 and proved unexpectedly popular. The science was good and the motives of the characters involved were effectively portrayed but the book was too close to the present and has already become hopelessly outdated. Another novel, *The Sands of Mars*, published in hardcover by Sidgwick Jackson, London in 1951, was documentary in approach. It tells of a science fiction writer's trip to Mars and his efforts to win the confidence of the pioneers there.

Superiority, a short story published in the Aug., 1951, issue of THE MAGAZINE OF FANTASY AND SCIENCE FICTION, brought Clarke prestige when it was made required reading for certain classes at the Massachusetts Institute of Technology. The

story had a moral for those scientists who are so determined to strive for increasing sophistication in their work, that they lose out to those aggressively utilizing conventional methods. The very same month, THRILLING WONDER STORIES carried *Earth-light*, the novelet originally written for Gilling's short-lived FANTASY. This story of a power struggle between the planets to gain control of the mineral resources of the moon contains one of the most vivid and thrilling space battles ever to appear in science fiction, not excepting the interstellar extravaganzas of E. E. Smith and John W. Campbell. The story was expanded into a full-length novel and published by Ballantine Books in 1955.

But by far the most important event of 1951 for Clarke was the publication of *The Exploration of Space* by Temple Press Ltd., London. A feature of this book was four full-color paintings by Leslie Carr, derived from drawings by R. A. Smith (who also had some black and white astronomical art in the volume). Harper's distributed the book in the United States where it was submitted to the BOOK-OF-THE-MONTH-CLUB for consideration. Basil Davenport, a science fiction enthusiast and literary critic, was then a reader for the organization. He understood the

scope of Clarke's book and highly recommended it to the judges. It happened to be a month when no "important" work appeared, so after some debate the judges decided on a joint selection for the month of July, 1952, one of them to be *The Exploration of Space*.

NEW hero of the science fiction world, Clarke was honored at the May 4, 1952, meeting of the Eastern Science Fiction Association in Newark, N. J., and at The Third Annual Midwestern Science Fiction Conference in Sharonville, Ohio. At those meetings members of the science fiction community attempted to assay the quality that had caused Clarke's book to score so effectively. There had been other books on space travel before, some almost definitive, embodying much greater research and even more fascinatingly written. Clarke's, they finally decided, was the first to define the "reasons why." He presented the case for space travel not only in terms of mechanics and economics but of *philosophy*.

To write *Childhood's End*, Clarke locked himself in a hotel room for two weeks. He used *Guardian Angel* (his own version) as the foundation of the first chapter and then built from there to a Stapledonian finale wherein all mankind unifies into

a single intelligence and ascends the next step in the ladder of evolution—which is to be sent to a spatial heaven in a mystical parallel to religion. *Childhood's End* (Ballantine Books, 1952), received the major review in THE NEW YORK TIMES for Aug. 27, 1952. Admitting that the ingredients of the novel were inherent in science fiction, the reviewer, William Du Bois, acknowledged: "Mr. Clarke has mixed them with a master hand." He termed the book "a first-rate *tour de force* that is well worth the attention of every thoughtful citizen in this age of anxiety." In conclusion he stated: "The review can only hint at the stimulation Mr. Clarke's novel offers."

Clarke then toured the United States, and spent some time in Florida skin diving. (In 1954 he married an American girl he had known for only a few days, but the marriage ended in separation after a relatively short period.) His interest in skin diving was the common ground that brought him together with Mike Wilson, a crack photographer. They went into a business partnership to do under-water photography along the Great Barrier Reef of Australia and the coast of Ceylon. Mike Wilson married a Singhalese girl and settled down in Colombo. Clarke became a

citizen of Ceylon and moved in with the Wilsons'.

Clarke then wrote a number of non-fiction works on skin diving, some in collaboration with Mike Wilson. However, his science fiction novel *The Deep Range* (Harcourt, Brace & Co., New York, 1957), which was dedicated to Mike Wilson, stands out as one of the most absorbing expositions ever done on the future of farming the seas. Impressed by its business potentialities THE WALL STREET JOURNAL reviewed the book in its April 2, 1957 edition.

THE highest honors Clarke received in the science fiction world were won at The 14th World Science Fiction Convention in New York in 1956, where he was Guest of Honor and also was presented with the "Hugo" for the best short science fiction story of the previous year, *The Star* (INFINITY SCIENCE FICTION, Nov., 1955). This story, dealing with the discovery of the remains of the star that went into nova at the time of Christ's birth, poses a moral dilemma which was intended to strike the reader with considerable impact.

A far greater honor was the receipt of the 1962 Kalinga Prize, awarded by UNESCO for the popularization of science. The presentation carries with it

\$2800 in cash; but from the prestige standpoint it placed Clarke in company with such past winners as Julian Huxley, Bertrand Russell and George Gamow. The prize was given in acknowledgement of the fact that Clarke's fiction and non-fiction have resulted in sales of over two million books in 15 languages, as well as more than 300 articles and stories in publications as distinguished as *READER'S DIGEST*, *THE NEW YORK TIMES*, *HORIZON*, *HOLIDAY*, *HARPERS*, *VOGUE* and *SATURDAY REVIEW*.

Clarke's "failings" as an author were many in the realm of science fiction. For the most part he was not an innovator. As a literary technician he was outclassed by a score of contemporaries. His style, by current standards, was anachronistic. Yet the public of many countries bought and read him with enthusiasm and the hard-headed critics applauded his efforts.

What is the answer to this seeming paradox?

In an age fraught with horror and despair he was optimistic. Mankind, in his stories, was essentially noble and would aspire and triumph despite all difficulties.

At the base of each of his stories was a thought-provoking idea, concept or philosophy. Whether they were original with him is beside the point. They were always present and they read new to this generation.

The ideas were never introduced obliquely nor reviewed in a blase, matter-of-fact manner, as is so often true of most modern science fiction. Instead, he vested his concepts with all the poetry, wonder, awe, mystery, and majesty that he was capable of conjuring. Even if it was only the preparation of the first space rocket, Clarke attempted to communicate the richness and implication of an overwhelming experience.

And his science, though thorough and authentic, was easily followed, adding to the willing suspension of disbelief.

For Arthur C. Clarke, the moment of decision as to what type of science fiction he wanted to write had come at the end of World War II. He chose to go against the trend. For him, a paraphrase of Robert Frost's famous lines certainly applies:

He took the road least traveled by, and that made all the difference.

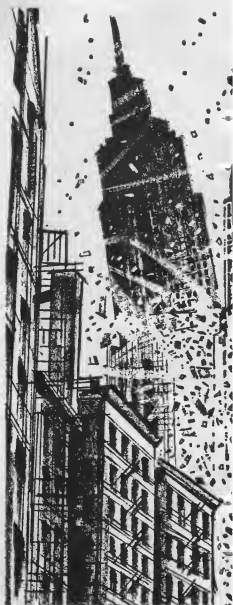
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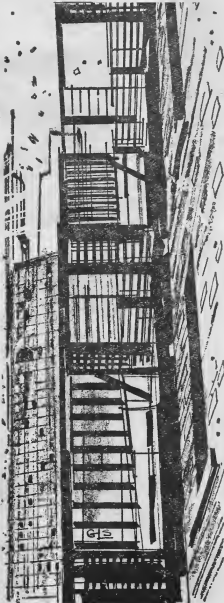
*Who knows the
secret of survival
after the day
of the big Blast?
Who really are . . .*

THE SMART ONES

By JACK SHARKEY

Illustrated by SCHELLING





THE first inkling came in a news bulletin that interrupted all regularly scheduled programming on the networks. Russia had uttered a flat or-else at the UN assembly, and the U.S. had countered with a steely just-try-it. That was all. It might be bad, it might not be so bad. Par-for-the-course or This-is-it. The bulletin lasted forty seconds, then regular programming was resumed. No warnings, no repeats of the Conelrad band-numbers, no stay-tuned urgings. Just the bulletin, then resumption of routine telecasts.

Pete Crolin turned to his wife, Beth. "What do you think?" he said, not having to specify his meaning further. A faint frown deepened the soft lines of her forehead.

"I don't know," she said, thoughtfully. "I think I'll call Lucille, see what she and Corey think."

Her husband nodded, then lifted his beer and sipped it slowly, savoring the taste as though he might not have the chance again, his eyes returning to—but no longer witnessing—the western which the bulletin had interrupted. Beth rose from her chair, smoothed her dress, then made her way to the phone. Lucille's was a number Beth called at least once every day, but she had to look it up after dialling two wrong numbers.

"Corey thinks so, too," her friend said, when Beth had told the reason for her call. "He's out checking the shelter. We've got plenty of water and food, but he thinks we need more books, just in case."

"I wonder why we think this is it," Beth mused. "We both felt it, and I guess you and Corey did, too. It's like that last straw on the camel's back. That kind of feeling."

Lucille, however, was in no mood for philosophizing. "Corey's coming in, honey. I've got to help him with the books. I'll call back later—" She gave a funny, short laugh. "If there is a later." Lucille hung up.

PETE had finished his beer, and was standing beside the silent TV, staring at the wall, when she returned. Beth took him by the arm, and he turned to face in her direction without resistance. "Pete," she said, then louder, "Pete!" Some of the far-awayness cleared from his eyes, and he saw her.

"Oh. What'd Lucille have to say?"

Beth gave a funny kind of smile and a half-shrug.

Pete nodded. "Them, too. I guess I knew they'd feel it. Everybody will. I wonder how long we've got."

His wife gripped his upper arms, hard. "Listen," she said.

"It's not too late, yet. Lucille and Corey have told us a dozen times to come in with them if things started blowing up. There's room. I have plenty of food, so we won't infringe on theirs. Let's go over there, now. Just— Just in case."

Pete wrenched away from her and shook his head violently. "No! I've told you, over and over. I'm not going to prolong things. If the world blows itself up, I don't want to hang around for a few extra weeks to die in the wreckage of thirst or starvation. I'd as soon go when the world goes." Then his manner softened, and he took her gently by the shoulders. "But, honey— If you want to go with them, it's okay. I'll understand. Let me help you pack the car, and—"

Beth's hand came up in a blurred arc and cracked stingingly against the side of Pete's face. "Stop it!" she cried. "Stop talking that way! You know I won't go without you. What's left if your gone!?" Pete had to grip her wrists to stop the frantic tiny fists that pummeled his chest in angry affection.

"Okay, okay, honey. I won't say it again. We'll stay here, together." He started to take her in his arms, then suddenly grinned and started turning her around to face the other way. "In fact, we'll have a party!" he

said, shoving her kitchenward. "Open that bottle of wine we've been saving for Thanksgiving dinner. We'll have it, tonight, along with maybe some of that anchovy paste we bought and never tried, and—"

"There's some cold chicken in the refrigerator," said his wife, catching his infectious enthusiasm. "And I think some onion dip, and corn crisps—"

The peal of the front doorbell stopped them in the hall. "Lucille?" Pete asked his wife. Blankly, she shrugged, then crossed the short foyer and opened the door. A young man in uniform burst in, his cap pushed crazily back on his short-cropped hair. "Pete— Beth— Listen!" he said. "Did you hear the news bulletin?"

"Martin . . ." Pete said, shaken. "Why aren't you at the base?" Martin Fenelly was a neighbor, a Space Reservist.

"Dorothea's out in the car. We're headed there now. Come with us, please!" begged the young officer.

"Something is going to happen, then!" said Beth.

"You bet your boots," said Martin. "Riots are starting all over the world. London, Chicago, Cairo . . . Anyplace with public shelters. People are trampling one another to get in."

"But the newscasters didn't say—" started Pete, simultane-

ously with Beth's halting, "Conelrad isn't on the air . . ."

"Conelrad!" spat young Fenelly. "They don't dare use it. If they did, the panics would grow. Right now, there's still a chance of keeping some order. One warning to the populace, and the country becomes a mob, two hundred million strong!"

"Pete—!" Beth turned to stare up into his face. "What should we do?"

Pete licked dry lips, then looked shrewdly at Fenelly. "What's at the base? Shelters?"

"A ship," said Martin. "A spaceship. Never been tried, or fully tested, but it's about the only real chance anyone has. I'm going, so's Dorothea, and three of my crewmen. The others are swiping jets to fly to their homes. They want to be with their families when hell breaks loose."

"But where's it flying to? Where can you go?"

"Moonbase," said Martin. "There's plenty of room, all the synthetic foods a person needs, oxygen-generators, water-recapturing systems. It's the nearest safe spot, as of that blowup at the UN today."

BETH turned a hopeful gaze to Pete. "Should we, darling? It's not like a shelter, like you were worried about. We don't have to come out and look for

food in the rubble. We can live indefinitely on Moonbase. Please, darling! Please?"

"I've got to think," said Pete, blinking. "It never occurred to me I'd have a third choice. I was resigned to sitting and waiting for the blast. Now— I'm all mixed up."

"It's *life* Martin's offering us!" pleaded Beth. "You can't turn down an offer of life, real survival!"

"But— But is it?!" asked Pete, uncertainly. "We can't leave Moonbase any more than we could leave Corey's shelter. What difference if we're buried alive to avoid radiation or freezing vacuum?"

"Pete, *please!*" said Beth, almost screaming.

"Damn it, Pete, make up your mind!" snapped Martin. "I can't wait another minute. My wife's out in the car; she's trusting me to take her to safety!"

"I— I won't go! Maybe I'm wrong, but I just don't want to leave. If I had time to think—"

"All *right!*" said Martin, starting for the door, angrily. "Try to do a favor, risk your own life, and—" Then he relented and rushed back to his neighbor. "Good luck, Pete," he said, gripping the older man's hand tightly. "Goodbye, Beth."

"No! No, wait!" said Beth Crolin, not daring to look at her husband's face as she rushed

after the young man. "I'll come with you!" Pete just stood like carved stone, watching, as Beth hurried down the front path into the night toward the waiting car. Martin, sick with embarrassment, turned a wryly apologetic grin Pete's way before following after her.

When the sound of the engine faded in the distance, Pete finally managed to move, and closed the door on the cold night outside. He went to the kitchen, stared hard at the bottle of wine in its corner of the pantry shelf, then yanked it down and smashed it to glittering bits in the sink.

* * *

"Corey," complained Lucille, "you *know* you're not going to read *Vanity Fair* or *Coningsby*. You've started them a hundred times, and always lost interest. We could use the space for a hundred better things."

Corey shoved the books doggedly back into the slot from which his wife had taken them on the bookshelf, and set his back stubbornly against them, glaring at her. "Those are records," he said, fighting an urge to shout. "The society of Thackeray's time, the British school system of Disraeli's. Some day our children will want to know what the world was like before the disaster."

"Why?" said his wife. "What they don't know won't hurt them. They'll never wonder about it if you don't prod them to. And why should they know about *Vanity Fair* and *Coningsby* anyhow? You've survived this long without knowing!"

"All right, all right!" snarled Corey, whirling to the shelf, and pulling books out by the handful. "Fill the space with Wheaties, or movie magazines! Or home permanents and lipstick! To hell with our children's minds!"

"Corey, stop it!" hollered Lucille, trying to pick the books from the shelter floor as he hurled them there, then giving up and simply trying to pin his flailing arms. His elbow struck her in the chest, and she fell back with a startled grunt. Corey, his face white, started toward her with words of remorse on his lips, then tripped ingloriously upon the heaped volumes and sprawled on his face at her feet.

Lucille sank into a chair as he rose groggily on hands and knees, and began to laugh. Corey, after a second, began to match her laughter with his own. Then he frowned and stopped. Her laughter was all wrong. He took her by the shoulders and shook her, but she kept on laughing while the tears ran down her contorted face.

YOU should have told me!" moaned Martin, on his knees beside the metal-and-nylon cot. Dorothea just groaned and tossed her head from side to side on the sweat-soaked pillow, fighting the restraining straps.

"S— Surprise," she mumbled, her features white with agony. "I w-wanted it to be a surprise."

"But—" her husband sobbed, beating his fists futilely against the steel bulkhead, "didn't you know the takeoff would be like that? Haven't I told you how many grown men had died of internal hemorrhages from the gravities they had to resist during takeoff? Didn't you suspect that you—!"

He stopped, and sagged, his head resting against the frame of her bunk, and just sobbed softly, uselessly, while his wife murmured, over and over, like a fragment of intolerably sad music, "My baby, my little baby, my poor baby . . ."

* * *

Pete sat in a thick, muddling fog, his fingers fumbling with paper and glue, sniffing softly in his misery. He didn't hear the light footsteps on the porch, nor the familiar voice, until his name was called for the third time. Then he started, guiltily, and began to try and hide what he held clumsily on his lap.

Beth came into their bedroom

and saw him, and what he was trying to do. The empty beer cans, the shattered glass upon the carpeted floor, and the ragged tear in the wallpaper between bureau and closet told her what he'd done. "I don't blame you," she said softly, cupping her hand gently about the back of his neck. Pete suddenly choked on his tears and flung his arms about her thighs, burying his face hard against her abdomen.

"I was so mad— so mad at you," he said between spasms of relieved weeping. "I came up here, drinking, saw the wedding picture on the wall— s-smashed the glass, and—"

Beth looked at the wedding photo where it had fallen in two curling halves upon the floor, and smiled. "But you tried to fix it again," she said softly.

"Of course I tried to fix it!" he muttered, keeping his face close against the warm softness of her belly. "I got mad, but I got over it."

"Me, too," said Beth. "A mile from the house, I screamed for Martin to let me out of the car. I had to walk back. No one's bothering to run the busses anymore. I— I saw the wine, in the sink. Is there any beer left?"

He nodded, mutely, still holding her tightly.

"Then we can still have our party," she said decisively.

"Maybe not so fancy as we'd planned, but—"

Then her husband was surging to his feet and stilling her lips with the hungry pressure of his own.

HOURS before the spaceship reached Moonbase, the men stationed there saw the horror begin. The orb of Earth, silver and blue against the black void of space, began to erupt with tiny bubbles of orange-and-white, faster and faster, until the shapes of the continents were limned against the steady blue glow of the oceans. Then the fringe of the oceans began to billow white rolling clouds of steam, and the planet shrouded itself in impenetrable heaving seas of angry white vapor.

Some common tacit urging made the men continue with their jobs there, go through the routine of scanning the universe, radioing reports to stations long since molten piles of slag, metering the water and precious oxygen that kept them alive. No one wanted to talk of what they'd seen; life went on for many hours as though nothing untoward had happened. Then, when the last strained thread of control was fraying madly—

The spaceship landed, with its five-person complement.

"More mouths to feed," said

the Moonbase commander, looking out through the port at the spacesuited figures moving clumsily toward the airlock. "I don't know if we should let them in. Even if it's the President, I don't know."

"Sir," said an aide, "Look there, in the lead. The small one, leaning on the arm of another one. I think it's a woman."

The commander's eyes hooded for a moment, then he turned to his aide and said, "Let her in."

"Before the others, you mean, sir?" asked the man.

"Let her in. Period."

"S-sir . . ." said the aide, his voice shaking. "You're not thinking of—"

"We've been here for three months without a woman, Captain," said the commander. "This may be the last one alive in the cosmos. I'm not sure the man with her would agree to sharing her."

"But the others—They can't live out there for more than a few hours in their spacesuits . . ."

But the commander had picked up a book of crossword puzzles, and was concentrating fiercely on a cryptogram. The other man swallowed noisily, once, then went to carry out the orders.

* * *

"It's over," said Corey to his wife. Lucille nodded dully.

"Don't you understand, honey? The bombing's stopped, and we're still alive. Enough food for months. The radiation-count will be down by then, and—"

"And what?" asked Lucille, staring from her husband's face to the two children sleeping on the military cot before the crowded bookshelf. "When it's down, what happens next?"

"Why— We go out. We rebuild."

"Rebuild? Rebuild what? How?" said Lucille. "Can you build a radio? If you could, who would we talk to, listen to?"

"I mean, rebuild houses, start farming, raise animals . . ."

"Will the land grow food any more? Are there animals left out there, or did they forget to burrow underground when the fires began?" said Lucille.

"Be reasonable, honey!" said Corey.

"That's what I'm being, for the first time in years," she said. "I wish we'd stayed with Pete and Beth."

"They've turned to ashes by now," said Corey.

Lucille shrugged. "Maybe they're better off." The baby began to cry, and kick its round pink legs.

"I think the baby needs a change, or something," said Corey, looking down at his infant son.

"Read him *Coningsby*," said

Lucille. Then she started laughing again, until Corey was forced to slap her face crimson to quiet her.

JUST a few weeks short of two years after the holocaust, the great spaceship settled on faltering fires to the charred surface of the Earth. The Moonbase commander, gaunt from long starvation, reeled out into the glaring white sunlight, fell face downward upon the sharp black rocks, and just lay there, trying to catch his breath. Behind him, a pale shadow formed in the blackness of the open airlock, and a woman crept out, her hair tangled and white-streaked, her face raddled with disease. She shuddered, and sank to a squatting position on the ground, covering her face with her hands to block out the horrible vista that ran for mile upon scorched mile.

"It's dead, the world's dead," she mewled, quaking. "We're at a wake, a hideous, horrible wake!"

The commander groaned and lifted himself up painfully on his elbows. "There's got to be something, somewhere, or we've had it."

"It's your fault," said the woman. "What did you expect the men to do when you kept me to yourself! You shared me with them nearly two years. You shouldn't have locked the men out of your quarters."

"I was drunk!" the commander said bitterly. "I didn't think they'd go berserk—wreck the synthesizers—fight among themselves—"

"I had a husband, once," said the woman. "You let him freeze to death, suffocate, all because he would have wanted to keep me for himself. You turned around and did the same thing." Musingly, she eyed a large jagged stone, lifted it in her hand, and approached the weary, sprawling form on the ground. "If he deserved to die, why not you?"

"That was different," said the commander. "I'd have shared you when I sobered up. He'd never—" He hadn't time for even a gasp as the woman brought the stone down with both hands upon the nape of his neck, shattering the bone beneath the thin flesh there. He fell forward, drooling blood on the sun-baked black rock.

"No," said the woman, brushing her hands firmly against her thighs to cleanse them of the feel of the rock. "Martin would never. That's why I loved him."

Tiredly, she began to walk, away from the ship and the memories of degradation it held for her, out across the hot, blazing plains of arid rock, humming a lilting waltz that had been played at her highschool prom.

When she could walk no further, she lay down on the rock, rolled onto her back, and smiled emptily at the stark blue skies overhead until unconsciousness stole over her.

A HUNDRED miles away, a naked boy knelt before a cairn of rock, frowning in concentration, his tongue tucked against the corner of his mouth as he carefully arranged smooth red pebbles before the cairn until their design pleased him. Under the cairn lay a steel-and-concrete door, and within the chamber beyond it lay the mummified bodies of his parents and siblings, as he'd found them when he was old enough to crawl. He was walking now, pretty well for his fifteen months of life. He could only judge his progress by the progress of others like him, children conceived amid the radiation and gene-mutating chaos of those first months in the shelters.

He'd determined to be a leader. He didn't know the word "leader", of course, but he would soon coin a sound that conveyed that meaning to himself and the others. He didn't know why his parents were dead, or the parents of the others like himself. Perhaps one always died when one reached a certain age. Still, why had his brother and sister died, then, since they had so

much growing to do before they matched that of his parents?

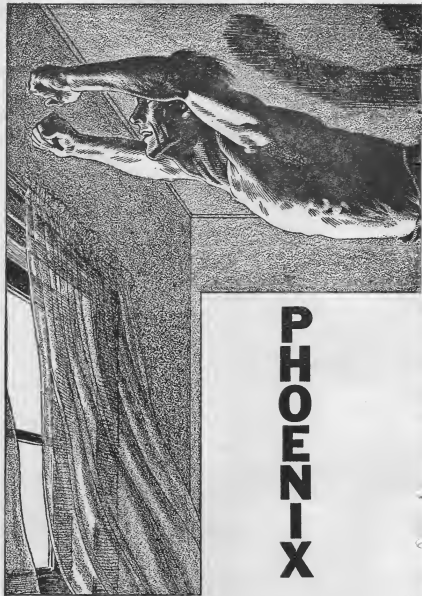
He shrugged away the problem, finished his arrangement of colored stones, and stood up to consider them. They would do nicely, he decided. They would prettify the spot where his ancestry lay buried, here amid the rocky splendors of such a lovely, incredibly beautiful planet.

He scowled, suddenly, deciding that the pattern of stones held one red rock too many. Carefully, he removed it.

He sent a short series of affectionate thoughts toward the departed souls of his family, then turned away from the cairn and began to toddle across the burning black rock toward the area housing the shelters of the other children. He was tired of mourning for the day. Besides, the other kids were considering building a structure to keep off the infrequent hot rains, and he thought he knew a way to support the roof which no one else had yet considered.

Thinking hard as he moved toward the community area, he tossed the colored pebble up and down absently in one hand, then popped it into his mouth and chewed it up with relish. It was only an appetizer. For dinner, at sunset, he had his eye on a rainbow outcropping of quartz. It should be delicious.

THE END





By **TED WHITE** and
MARION ZIMMER BRADLEY

Illustrated by **FINLAY**

*From nowhere had come the flames . . . giving him life
and death together. Now he summoned them again, not
knowing the depths—or heights—of his power.*

HE lived. He was aware. He was everything in his world. He was . . .

Flames wrapped themselves around his body, pouring sinuously around him. For a few seconds, as he stood in the cen-

ter of the floor, he writhed; pure reflex; then he relaxed and gave himself up to the heady luxury of the roaring fire which clothed his body. He basked in flames.

His mind was afire, too. *It feels like . . . like satin ice! No,*

it's different. It's . . . it was something new; his senses were still adjusting themselves to the new reality, and his mind contained no images with which to compare it. He didn't see or hear Fran open the door.

"MAX!"

He shook his flaming body and a few brief cinders fell away in sparks. Then, suddenly, he had snuffed out the aura of flames; he was standing nude on a smoking carpet, grinning tentatively at the girl. He swallowed and said "Hell of a time for you to show up, Fran."

She seemed to stare at him without seeing him, her face taut, without expression. He blinked, slowly coming down or up to reality again. Good God, yes, she thought he'd been burning up. The odor of the carpet—it smelled like scorching hair.

"I forgot about the carpet." He watched her glance down at it. Acrid smoke still curled away from two singed-bare patches where he'd been standing.

Slowly, Fran raised her eyes back to his. She said "Max—!"

She took one faltering step toward him; then she crumpled and swayed forward. He caught her in his arms as she fell, straining her close. The physical contact of their bodies brought him back to the level of reality again, to a complete realization

of Fran's plight. He tried to make his grip as firm, as reassuring as he could—to bring her back to a world in which men were not, one minute, cloaked in streaming flame, and the next minute alive and human and—

"Max!" She straightened, "You don't have any *clothes* on!"

"I know. I lose more pajamas that way," he said, lightly, keeping his voice casual. "Sit down, Fran, and I'll put on a pair of pants, at least."

HER face was chalk-white; the color had drained from her mouth, leaving the lipstick like paint on a corpse. She was rigid with shock. She hardly seemed to hear him, and let him lead her, like a child, to the sofa. *Oh, God, why did she have to come in just now?*

"Lie down here for a minute, Fran. Here, put your feet up on the arm. Fran, it's all right, I'm all right; take it easy, now. I'll be right back."

He retreated into the bedroom, quietly closed the door behind him, and leaned against it for a moment. His whole body slumped.

The room was quiet, just a third-floor bedroom in an old house, now a converted rooming-house for students, half filled with sunlight. Max heard his own breathing loud in the si-

lence, looked down at his naked body, then at his pants, draped over the bed. He stared at them and closed his eyes. His body grew rigid.

Slowly, the pants began to stir as if with a breeze; but all else was still. Sunlight cut across the stationary dust-motes suspended in mid-air, and the warm summer noon seemed to hold its breath. The pants legs flapped.

Then, suddenly, the room was filled with a timeless density. The silence of the moment before thickened into a tangible, measurable dimension, possessing a reality of its own. He could taste the silence.

He rose three feet into the air, his head clearing the ceiling by inches. As he did so, the tension dissolved from his muscles; he lay loose-flung on the air and watched articles of clothing, first his briefs, then pants, sweatshirt, socks and finally shoes, moving to him and draping themselves over, around, up and onto his body, flowing onto him as if themselves fluid.

The door opened before he reached it. He took a deep breath, set his feet on the floor, and walked into the other room. Fran started upright as he came in, and flinched away.

"Fran, are you afraid of me?"

She nodded, moving her mouth mutely.

Easy, for God's sake, easy, the

girl's on the ragged edge of hysterics. Take the light touch.

"Afraid of me? Now that I'm fully clothed again and didn't even attempt felonious rape?"

"Don't laugh," she said, finding her voice. "I know what you're trying to do. But—don't. And don't tell me that I didn't see—what I saw." Her eyes moved quickly, a little rabbit movement, to the charred carpet, and away again.

"Fran." He seated himself beside her and took her face in his hands. "I'm not denying anything. What you saw—it happened, yes—but it wasn't—" he ran out of words.

"I'm not crazy! And it wasn't an illusion!"

"Okay, then! I'm a warlock! I weave dark spells! I've sold my soul to the devil! Do you like that any better?" He flung the words at her, bitterly.

"Are you, Max?" she asked softly, when he had run down.

"I don't know. I don't—Fran!" He fell against her, and felt her arms reach out for him, hold him as he collapsed at her side.

THE touch did what words had failed to do; he felt the rigid, frozen fright flow out of her as she held him; hard, clasping his spent body in her arms. With a sigh, she drew his head against the softness of her breast and let him lie there.

This was the best way. It had come to him without words; perhaps there were no words. But what had he done to Fran, to this shy girl who held him now so tightly? He sensed, through the tension of her terror and its release, that she loved him—did he love her? When he had asked himself that, he could not answer—yet now, in his response to her, he sensed his own answer.

Words, more words—what did they mean? Reasoning was a barrier, not a path. He had always felt most apart from her when he had tried to think out their relationship into words. Better to let the words go, better to react.

They lay together unmoving on the sofa for a moment which was, for them, timeless—perhaps fifteen minutes, perhaps two or three hours. They exchanged no words, no gestures, not even a kiss. They simply *were*, sharing a moment of that meshed, tangible silence in which there was no Max, no Fran; instead a gestalt, a separate emotional entity.

"Tell me about it," she said finally.

It was like surfacing after a deep dive. He blinked. "I don't know what happened."

"How did it begin?"

He turned slightly, snuggling closer to her, his cheek buried

against her neck, his shoulder tucked under her arm, her arms warm around his body. He paused, then reached out for words and found that the words were there.

"If you want to be rational about it—that is, if we *can* be rational about it—I guess it's what you'd call a wild talent."

"*Wild* is right," she said with a shaky laugh.

"Psi power, I guess you'd call it—I can make things move, or—things happen.

I HAD a dream last night. It was a very strange kind of dream—you know how sometimes you have dreams about flying? Like, you're running along on the ground, and sometimes you can jump, and pull your feet into the air, and then you paddle yourself along with your hands—? I dreamed I'd done this and I was floating and weightless, pulling myself around with handholds like an astronaut in a spaceship, only the handholds were the branches of a tree. I was floating, and pulling myself into the tree.

"Things began feeling strange. Like they were happening in double—like the dream was fading out into sleepwalking. And then I woke up.

"Fran, *I was holding on to the curtains of the window next to my bed, and I was floating about*

even with the top of the open window!"

He felt her arms tighten around him, but she neither moved nor interrupted him. Blessing her, he went on;

"It scared me silly, but my first thought was; *Migod, I nearly flew out the window*—just as matter-of-fact about it as if I'd been sleepwalking and woke up and said, *Oh, I almost walked down those stairs*. And then I guess I woke up the rest of the way and really realized what was happening, and the next thing I knew, I was lying cross-ways on the bed, with all the breath knocked out of me."

His body had tensed again with the growing excitement in his voice; sensing it, he shivered and moved closer into the warmth of her arms. "Fran, don't let me do anything *now!*"

Slowly, under the reassurance of her touch, he felt the spasm dissolve, flow into words again.

"When I woke up, I thought it had all been a dream—I mean, I wanted to believe I'd dreamed it, but I knew better. I wandered out here into the living room, and just kind of went through the motions of breakfast, without noticing what I was doing. After a while I—well, located myself sitting at the table, staring at my coffee and realizing it had gone cold. I wasn't thinking, Fran, I wasn't thinking

about anything. I was just staring at that coffee and wishing it was good and hot again, and— and then it started *steaming*."

"Fran, I didn't touch it, I just looked at it. I looked at it, and suddenly I wasn't just looking at a cup-of-coffee any more. I began to see it—really *see* it. I began to see the relationships of every component in the cup and the coffee, the chemical and molecular—no, that's not what I mean, either—I could see, not really with my eyes, the entire series of relationships between all the overlapping fields of energy—no—" he broke off again, helplessly.

"I can't make sense of it for you. I don't have the words, maybe there aren't any—I could *see* it, you understand; I didn't try to explain it, even to myself. I can't, now. It's just—everything's *motion*, and I could reach out and—and speed it up, or slow it down, and I'd heated it up—" he shook his head a little and was silent, clinging to her.

HER voice was levelled when she spoke, a flat surface spread thin over panic; toneless. "I'm not a —a nuclear physicist, but it sounds as if you were trying to put the theory of atoms and force-fields into one word. Like—matter not being solid but just little bits of loose energy whirling around and

building up into atoms and the atoms into molecules."

"That—I guess so. As if I'd learned to—oh, to see into them. But how? *Why?*"

"It takes in a lot of territory," she said, still the flat stretched toneless voice. "Just to wake up and find out you had it, whatever it was."

He hardly heard. He drew himself upright, his hands clasped, tensing, searching for words. "Like—like ice and water and steam are all the same thing, only we see them differently. We just see different aspects of the same thing, and it's all the same, all this—*motion*. And I could control it! I could control *everything!*"

"Max—"

"Yes, I know. It's frightening. I'm still afraid, and I think I've been afraid ever since I woke up from that dream. I'm afraid to really try anything—oh, thank God you came, Fran! Thank God! I think I'd have cracked up if you hadn't!"

But the moment of complete and intense rapport was gone; Fran had drawn away from him again, and he felt cold and afraid. He had said too much; she was afraid of him again, and her fear, like her love, communicated itself to him through the impalpable fibres in his very skin. He soaked up her fear and babbled it forth again.

"I've been afraid to really try anything, because that's playing God. I've been doing parlor tricks, Fran, because I haven't really wanted to face the fact that I could do so much more than that!"

"Think about it! I turned the air around myself to flames—and burned off my pajamas before I thought to do more than protect my body—because that was sort of wild and weird and ego-inflating. I've wished my clothes on, and levitated, and moved things around—but these are *little* things! Petty things. But Fran, I could have done so much more—I could wipe out war—there are a thousand ways I could do it. I could feed the starving and house the homeless—Hell, that's miniscule, I could change this whole damn planet, I could change *myself*, make my body so I could go anywhere, anywhere in the whole physical universe—Fran, *I could be God!*"

His whole body shook. "I could be God, and I'm playing with burning carpets! Fran—oh, Fran, it's too much for me! I'm not God, I don't want it, I'm too small for it—I wish it was only a dream and now I could really wake up and find it never happened—oh, Fran, Fran, tell me what I am, tell me what to do!"

Aware only of pain and terror, he felt his face wet and did not even know he was sobbing.

"You're Max, Max," Fran wept, "You're Max, and I love you—"

AGAIN the touch calmed him. He clutched at her desperately, clinging to reality, to the wholeness and rightness of her body in his arms, in a sort of senseless terror lest that, too, should dissolve suddenly into a flux of intermingling atoms and force-fields. He was aware only of Fran, close and warm against him, their mingling breath, his own rising hunger and need. He wanted to melt into her, lose himself in her flesh and her reality. The clothes she was wearing separated them, were a senseless intrusion into his longing for contact, for one-ness. He moved. They were gone, her body warm and naked in his arms.

"Fran!"

But she was white and rigid in his arms, thrusting him away, gasping with terror. "What are you doing? Max, no!"

It was an icy shock, a rejection like a flood of ice, thrusting him back into the wild senselessness of his sudden mad universe. He felt only the desolation of being alone. He wept, feeling the tears on his cheek;

Did God cry?

Crying? Clutching desperately at this frigid slip of a girl for salvation, when the whole universe awaited him? He pushed

himself up, away from her; he heard her voice as if from a great distance, making words, but he was past words.

Blackness closed in about them; time slowed, the eddies of air swirled to a halt, and lances of fire swirled through his mind. Then, beyond the realm of three dimensions he *saw* her, clearly.

His mind shattered into a thousand crystals, reflecting prismatically pounding emotions he could not directly face. He looked at Fran, into her, through her, beyond her.

He saw; not the immobilized figure of a frightened woman, her body helpless beneath his own on the sofa. In fact, he saw not even the sofa.

He saw; beyond the immediacy of the fields of motion contained in finite space as his body, he comprehended other patterns of sub-atomic flux. Below him was a geometrically ordered matrix, a precise framework simply constructed. But above it he found an area of disorder. Complexity, confusion, patterns and sub-patterns of a structure so immensely varied and subtly differentiated as to be nearly incomprehensible. The motion! Movement! *Life!*

It offended him. It was vulgar, teeming, unruly, impossible! He began to reach out to it. . . .

"MAX!"

A body had flung itself at him,

kicking, scratching, screaming. He was toppled back and suddenly lying on the floor, back in the narrow confines of a single body again. His head rang and her words were slowly becoming words again.

They hurt his ears, jangling with their ridiculous cadences against the sublime expanse of perception. "No, *no!* I loved you, but you—you're mad—you're not Max—"

And then she had flung herself through the door and was gone, her running footsteps growing fainter on the stairs.

SLOWLY, Max surrendered himself to a chair, without any awareness of his human motions. The old chair enveloped him with the old overstuffed cushioned arms and gave him a musty embrace and for a moment he was part of all its enfolding past, the weariness that had come into its unrejecting depths for comfort and rest. His face was still wet with the tears he had shed before, and now they began to swell and flow again, erupting and cascading almost without volition.

Fran was gone.

She was gone, and she had been all he had, all that was ever really real to him. Dimly he sensed, without knowing, that it had been a double failure. Fran had refused, rejected his

need—but was it Fran's fault, that he had been unable to reach her? Had he ever been able to reach any human creature? Had he ever *wanted* to, except in his own selfish desire? He spoke of loving Fran, and yet he had shied away from that answer—until he needed her.

And so his vast paranormal powers were meaningless, because the physical universe itself was without meaning. Ordered, yes. Finely structured. But with no more meaning than an alarm clock. He could be God, and yet the only safety and sanity he had felt was when Fran drew him back from the brink of the bewildering nothingness into the shelter of her breast.

But for all his control of *things*, he had been unable to achieve that blending that meant power. He had only a meaningless power over things which now, in essence, were only nothingness in various rates of flow. . . .

The sun had set and he had turned none of the lights on. The gloom of dusk settled, blanketing his body with darkness and his mind with despair.

If Fran—If. A meaningless word now. If Fran had only accepted him—if he could control his own emotions as easily as the magic-show flames he had donned! But he had feared to surrender himself to any emo-

tion, he had given too little of himself to Fran—and when the moment of his need came, she had nothing of him that could call him back safe from the borderland of bleak despair.

He wasn't fit. Like a baby given a straight razor, he could not cope with his gift, and the outcome was inevitable. There was only one answer.

Best do it now.

* * *

Suddenly the darkness was pierced by flames, a flickering, growing fire which enveloped and covered his body. His clothes vanished in a flare of flame, spreading to and attacking the soft upholstery of the chair.

A small thing to salvage, his ego. But this was the grandiose way, the *big* way—for the big failure.

He sat for long moments, crowned in golden flames, lost in contemplation of the streams of superheated glowing ions ra-

diated from the burning carbon. Then the chair shifted as cloth burned through, fibre straps released their hold on the metal springs of the seat.

Time.

Deliberately, without emotion, he released his hold on the lines of force which demarcated the limits of his body.

His hair vanished instantly in a shower of sparks and simultaneously a furnace blast beat in on him. Then his skin was blistering and blackening; gone. He collapsed into his funeral pyre, flinging out limbs in reflex spasm and struggle, and he was . . .

He lived. He was aware. He was everything in his world and still nothing; streams of force, patterns of sub-atomic flux. He was a moment when all fear and all perception had vanished, blending into a gestalt that was more than himself. . . .

In her uneasy sleep, Francine floated five inches above the surface of her bed.

THE END



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The Tale of the Atom

By PHILIP DENNIS CHAMBERLAIN

Introduction by Sam Moskowitz

To write a very good brief story has always been difficult in science fiction. If it is not to be classed as a prose pastel or a literary vignette, the short-short story requires a "snap" or surprise ending. This is difficult enough in general fiction where names of places or objects become symbols conveying a background which familiarity makes possible for the reader to take for granted. Science fiction has the problem of establishing the background before it can ring in the trick ending. The Tale of the Atom is the only science fiction story ever accredited to its author. Yet it is impressive for the number and scope of ideas compressed into so little space and because it actually contains two surprise endings.

ATWAR spun his motor-chair deftly about and rolled over to the blue enameled all-metal cabinet. Pulling out a drawer he withdrew a small instrument and sped back to his slate-topped workbench. Once there he made a few adjustments in the weird machine that stood upon it.

A weird machine it was, a jumbled mass of wires that led

to a small, porcelain-like chamber within which the wire seemed to be fused into a solid mass. Above the chamber was a compound microscope of peculiar shape, with a double eyepiece and a sort of keyboard mounted on its side. There were other peculiar things about the microscope; for instance had one been able to examine it, he would



have noticed that all the illumination was provided through a microscopic aperture underneath the chamber, and that the light was artificial, provided by a mercury lamp of some type and filtered through two lenses before it reached the hole. Had Atwar been in a talkative mood, which he never was, he would have explained, that the purpose of those lenses was to increase the magnifying power in a peculiar system of his own.

Atwar was quite proud of the affair for from bottom to top it was his own invention and the thing he proposed to do with it, of course with the help of his assistants, would undoubtedly astound scientific circles if he

succeeded, and he knew he would succeed.

While he made a minor adjustment with two right hands, he prepared a pad and pencil with a left hand and reached for a bottle of small transparent crystals with the other left hand. An assistant rolled briskly into the room, one of Atwar's four huge compound eyes turned from the instrument to him; in silence the assistant received the thought-order and sped out of the room. A second later he was back bringing with him a group of thought-readers who were to read Atwar's mind during the experiment and to accurately record his impressions at first hand; this made it equiva-

lent to having four separate people perform the experiment.

Silently Atwar bent over the microscope, two huge eyes focussed upon the stage, a third was on the paper pad on which he would write the results of the experiment, while the fourth eye gazed straight at the group of thought-readers, in order to facilitate their task, for it is through the eyes that the mind is most easily read. With deft six jointed fingers he picked up a pair of tweezers and placed a minute crystal of the substance, which was in the bottle, upon the stage. He fingered a button on the keyboard and the stage became illuminated. Under the enormous magnification the myriad of wires no longer seemed fused together, rather they were seen to be skillfully woven into a fine screen of some sort and on that screen lay the crystal; he adjusted the focus.

CAREFULLY he twisted the knobs that controlled the microscope's adjustments, the crystal faded into vast nothingness. But was it nothingness? The blackness seemed to be filled with small, blowing points. He gave the knob another twist. Slowly materializing out of the blackness, a dull reddish ball about the diameter of a cent appeared, and about it spinning at great speed were minute specks,

like grains of dust in the sunlight, or was it only his eyes? His fingers adjusted the knobs and the red ball grew to the size of a small orange, covering the whole stage. He slid the stage slightly to one side and three of the specks came into view, now as large as pinheads. By careful manipulation he counted eight; it was as he had thought; now he must finish; the committee met at seven and he wished to have a report ready. He made a rapid calculation as to what wire the atom must be over and pressed a button. There was a flash that half blinded him, but that was all; he had miscalculated. Speedily he worked out the correction on the pad by his side and pressed another button.

* * *

The earth was terror stricken. Men no longer rode daily to their work in the great synthetic food plants; the huge, pleasure parks were deserted, for in the year G73000 the end of the world had come at last. Panic had descended upon the earth and science was helpless. Prophets of a god who had been forgotten over seventy-eight thousand years before, (and reckoning in old time it was now the year 86,300 A.D.), were arising and proving by a forgotten volume called "The Holy Bible" that all this had been prophesied years ago

and that now was the time for repentance. There arose also another and more generally followed cult which held the direct opposite of the first, namely that the end was here and now was the time for pleasure; the streets of the cities were the scenes of wild debaucheries, and robbery and murder were rampant. Also there was a small group which, strange to say, kept their heads. They were chiefly the great scientists of the planet, those who knew it was up to them to save the world. All day long and far into the night they worked, trying to devise schemes that stood a chance of being successful; they had all the laboratories of the world at their disposal and they worked with feverish haste, most of them even taking to a vice which had died out centuries before—dope—to keep them going; and they had to go on; if they failed the world was doomed.

DR. ALICE NOAH was undoubtedly the head of the group, she had been head of the government laboratories for a bare two years, when the catastrophe came, but already she had a world-wide reputation and she was unanimously chosen to head the body. A part of her speech of acceptance of leadership is quoted, so the reader may understand the situation.

"My colleagues," she said. "we all realize that it is on us that the fate of the world depends; we have been called together in the eleventh hour to undertake a task it would be difficult to complete in a lifetime, and we *must* do it! . . . We should have taken warning three hundred years ago, when Sirius was wiped out by a strange flash, but our ancestors took no heed and now we find ourselves attacked without adequate or even partial protection. . . . We all know what is threatened, something is rapidly exploding in the sun! Unless it is stopped we have only six months left, before we shall be without a solar system, and we shall go flying out into space, a dead, cold meteorite. Ladies and gentlemen, it is up to us to see that it is stopped!!! Already the sun is showing signs of vast electrical disturbances and from Mount Wilson comes the report that a blue flame of some sort is rapidly approaching Sol, our sun. My friends, we know that flame is the same thing that destroyed Sirius and unless something is done it will do the same thing to our sun. I await your suggestions."

Many ideas were advanced and rejected. For the most part they were as foolish as the theories of those who set out in space-ships for Mars, not realizing that, with the break-up of

the sun, Mars would be as badly off as earth. A number thought of establishing some sort of a counter-current, but it was pointed out that it was not known whether or not the "destroying flame," as the religious fanatics had named it, was electrical or not, and that, if it were such, there was not enough electrical power on earth to successfully neutralize it. Another group tried to make out that the dangers were overestimated but without successfully convincing even themselves. The greater part of the group, however, could think of nothing and so they remained deadlocked for two months.

It was the sixteenth of Sol (thirteen-month years had been adopted centuries back) that Dr. Hubbard Granstedt proposed his plan, and the entire convention stood amazed at the bearded old patriarch's suggestion. For two precious weeks it was fought for and against, but the doctor had his facts and figures so clearly disposed that it was finally adopted. Then all the body went into action, and by that statement it is meant that twenty billion tireless robots started to labor, day and night, to complete the terrific task.

Everything was in readiness by September eleventh and the world was waiting, waiting breathlessly for the result of the

test of the forlorn hope of humanity. From points all over the globe huge structures, like the long range guns of a bygone day, were pointed skyward, and a network of some sort of pipes completely checkered the globe. An anxious world was waiting its time.

THE eighteenth of September was the fatal date. At three-thirty in the afternoon the blue flash streaked across the solar heavens, heedlessly annihilating Venus and Halley's Comet in its course and struck the sun. There was a huge flash, the like of which had never been seen before, and the sun crashed into hundreds of flaming pieces which flared up in the solar heavens each a little star in itself. Throughout the entire universe there was a jar as the stars readjusted themselves to the loss of their brother and things started to quiet down.

It was the instant the flame had struck, that Dr. Granstedt had thrown the switch which was to save or ruin the world. From the vast network of pipes that lay over the world had arisen huge clouds of gasses that dimmed the explosion of Sol to all human eyes. Slowly, in great billowing clouds, they went upwards, until they seemed to merge into one vast mass that completely surrounded the

atmosphere. Then the change took place. The clouds seemed to lose all cloudlike aspect and to take on the appearance of a solid ceiling; there was a singing sound as of metal understrain and then all was quiet. An experimental rocket was projected; up, up it went until it reached the ceiling; then it seemed to strike something solid and in another instant it was falling back to earth, its steel head buckled by the impact of a collision. Dr. Grandstedt smiled for the first time in many months; it was as he had hoped and planned; the gases, no longer warmed by the heat of the sun, had solidified and formed a solid casing around our earth and her atmosphere. Terra had retreated within her shell.

To an observer from the outside Terra now had a strange appearance, it was no longer truly round for at intervals huge, spike-like tubes protruded from its coverings, tubes which, an instant later, began to shoot forth streams of fiery gasses into the void. There was a horrid lurch, and the planet started to move!—Terra was seeking a new master; the world was in search of another sun!—.

IT WAS a long journey through space; the world had become a new and gigantic space-ship, propelled by huge atomic rock-

ets, and carrying its natural atmosphere and heat hermetically sealed within its transparent man-made shell. It was not so hard to reach its new sun, as if in preparation for the catastrophe from time immemorial the Sun had been rushing toward Vega at an inconceivable speed and now the earth under its own power completing the last lap of the trip for it was toward Vega the independent planet was traveling.

It took nearly a year to complete the journey but then, as if prearranged, the earth fell into an orbit about the star and took for itself a place where the heat from the second sun would be adapted for human life. Dr. Granstedt had calculated the flight to perfection. It was six of the new length years (1,362 days) before the semi-transparent outer shell was melted off into gaseousness by Vega and when it happened, a strange sight was revealed. There lay the world, still surrounded by its atmosphere and still temperate in climate, but there was some difference. Where were all the mountain peaks that had once risen into the atmosphere, where were the long low plains? Everywhere things seemed different. Where was the land? All over the surface of the planet was a vast shallow sea, with here and there a tiny island dotting

its surface; all the main land was submerged!! Dr. Granstedt's travel idea had been perfect but he had forgotten one little thing; *he had left the moon behind!!!!*

IT was a horrible death that the human race had suffered, the uncontrollable water had swept the land clean of life, the very surface of the earth, without the moon's continual pull had buckled and twisted, throwing masses of lava into the steaming sea. The earth had become a chaos in which no life could have hoped to exist, however hardy it might be. But that is all over now and scientists on one of Vega's inner planets are still trying to figure out in their reptile heads, for intelligence is not a strictly hu-

man feature, what brought the watery planet to join the huge star's coterie.

* * *

Atwar pushed back his motor chair. "I knew I could do it," he said, or rather his eyes passed on the message, for his race carries on all conversation in that way, not having been equipped with vocal cords, "I always have said that the atom could be exploded and now I've proven it. It was all as I expected it to be, except that I can't understand what made the third electron jump to another atom, but of course that is a minor detail. But come, we must announce our findings and the committee meets in five minutes."

Whirling his motor chair he glided from the room.

THE END



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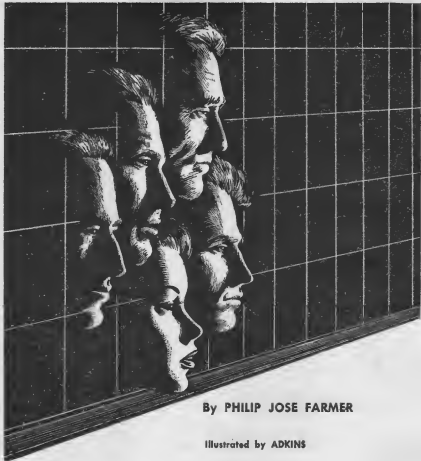
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By PHILIP JOSE FARMER

Illustrated by ADKINS

HOW DEEP THE GROOVES



**Until James Carrod
performed his experiment,
there was one voice
inside of each of us that
always told the truth.
But after Cervus III, there
were suddenly two voices.
And only one
was the voice of conscience.**

ALWAYS in control of himself, Doctor James Carroad lowered his voice.

He said, "You will submit to this test. We must impress the Secretary. The fact that we're willing to use our own unborn baby in the experiment will make that impression a deeper one."

Doctor Jane Carroad, his wife, looked up from the chair in which she sat. Her gaze swept over the tall-lean figure in the white scientist's uniform and the two rows of resplendent ribbons and medals on his left chest. She glared into the eyes of her husband.

Scornfully, she said, "You did not want this baby. I did, though now I wonder why. Perhaps, because I wanted to be a mother, no matter what the price. Not to give the State another citizen. But, now we're going to have it, you want to exploit it even before it's born, just as . . ."

Harshly, he said, "Don't you know what such talk can lead to?"

"Don't worry! I won't tell anyone you didn't desire to add to the State. Nor will I tell anybody how I induced you to have it!"

His face became red, and he said, "You will never again mention that to me! Never again! Understand?"

Jane's neck muscles trembled, but her face was composed. She said, "I'll speak of that, to you,

whenever I feel like it. Though, God knows, I'm thoroughly ashamed of it. But I do get a certain sour satisfaction out of knowing that, once in my life, I managed to break down that rigid self-control. I made you act like a normal man, one able to forget himself in his passion for a woman. Doctor Carroad, the great scientist of the State, really forgot himself then."

She gave a short brittle laugh and then settled back in the chair as if she would no longer discuss the matter.

But he would not, could not, let her have the last word. He said, "I only wanted to see how it felt to throw off all restraints. That was all—an experiment. I didn't care for it; it was disgusting. It'll never happen again."

He looked at his wristwatch and said, "Let's go. We must not make the Secretary wait."

She rose slowly, as if the eight months' burden was at last beginning to drain her strength.

"All right. But I'm submitting our baby to this experiment only under protest. If anything happens to it, a potential citizen . . ."

He spun around. "A written protest?"

"I've already sent it in."

"You little fool! Do you want to wreck everything I've worked for?"

Tears filled her eyes.

"James! Does the possible harm to our baby mean nothing to you? Only the medals, the promotions, the power?"

"Nonsense! There's no danger! If there were, wouldn't I know it? Come along now!"

But she did not follow him through the door. Instead, she stood with her face against the wall, her shoulders shaking.

A MOMENT later, Jason Cramer entered. The young man closed the door behind him and put his arm around her. Without protest, she turned and buried her face in his chest. For a while, she could not talk but could only weep.

Finally, she released herself from his embrace and said, "Why is it, Jason, that every time I need a man to cry against, James is not with me but you are?"

"Because he is the one who makes you cry," he said. "And I love you."

"And James," she said, "loves only himself."

"You didn't give me the proper response, Jane. I said I loved you."

She kissed him, though lightly, and murmured, "I think I love you. But I'm not allowed to. Please forget what I said. I mean it."

She walked away from him. Jason Cramer, after making sure that he had no lipstick on his

face or uniform, followed her.

Entering the laboratory, Jane Carroad ignored her husband's glare and sat down in the chair in the middle of the room. Immediately thereafter, the Secretary of Science and two Security bodyguards entered.

The Secretary was a stocky dark man of about fifty. He had very thick black eyebrows that looked like pieces of fur pasted above his eyes. He radiated the assurance that he was master, in control of all in the room. Yet, he did not, as was nervously expected by James Carroad and Jason Cramer, take offense because Jane did not rise from the chair to greet him. He gave her a smile, patted her hand, and said, "Is it true you will bear a male baby?"

"That is what the tests indicate," she said.

"Good. Another valuable citizen. A scientist, perhaps. With its genetic background . . ."

Annoyed because his wife had occupied the center of the stage for too long, Doctor James Carroad loudly cleared his throat. He said, "Citizens, honored Secretary, I've asked you here for a demonstration because I believe that what I have to show you is of utmost importance to the State's future. I have here the secret of what constitutes a good, or bad, citizen of the State."

He paused for effect, which he

was getting, and then continued, "As you know, I—and my associates, of course—have perfected an infallible and swift method whereby an enemy spy or deviationist citizen may be unmasked. This method has been in use for three years. During that time, it has exposed many thousands as espionage agents, as traitors, as potential traitors."

The Secretary looked interested. He also looked at his wristwatch. Doctor Carroad refused to notice; he talked on at the same pace. He could justify any amount of time he took, and he intended to use as much as possible.

MY Department of Electroencephalographic Research first produced the devices delicate enough to detect the so-called rho waves emanated by the human brain. The rho or semantic waves. After ten years of hard work, I correlated the action of the rho waves in a particular human brain with the action of the individual's voice mechanisms. That meant, of course, that we had a device which mankind has long dreamed of. A—pardon the term—mind-reading machine."

Carroad purposely avoided scientific terminology. The Secretary did have a Ph.D. in political science, but he knew very little of any biological science.

Jason Cramer, at a snap of the

fingers by Carroad, wheeled a large round shining machine to a spot about two feet in front of Jane. It resembled a weird metallic antelope, for it had a long flexible neck at the end of which was an oval and eyeless head with two prongs like horns. These pointed at Jane's skull. On the side of the machine—Cervus III—was a round glass tube. The oscilloscope.

Carroad said, "We no longer have to attach electrodes to the subject's head. We've made that method obsolete. Cervus' prongs pick up rho waves without direct contact. It is also able to cut out 99.99% of the 'noise' that had hampered us in previous research."

Yes, thought Jane, and why don't you tell them that it was Jason Cramer who made that possible, instead of allowing them to think it was you?

At that moment, she reached the peak of her hate for him. She wished that the swelling sleeper within her was not Carroad's but Cramer's. And, wishing that, she knew that she must be falling in love with Cramer.

Carroad's voice slashed into her thoughts.

"And so, using the detected rho waves, which can be matched against definite objective words, we get a verbal picture of what is going in the subject's mind at the conscious level."

He gave an order to Cramer, and Cramer twisted a dial on the small control board on the side of Cervus.

"The machine is now set for semantic relations," Carroad said.

"Jane!" he added so sharply that she was startled. "Repeat this sentence after me! Silently!"

He then gave her a much-quoted phrase from one of the speeches of the Secretary himself. She repressed her scorn of him because of his flattery and dutifully concentrated on thinking the phrase. At the same time, she was aware that her tongue was moving in a noiseless lock-step with the thoughts.

The round tube on the side of Cervus glowed and then began flashing with many twisting threads of light.

"The trained eye," said Carroad, "can interpret those wave-forms. But we have a surprise for you to whom the patterns are meaningless. We have perfected a means whereby a technician with a minimum of training may operate Cervus."

HE snapped his fingers. Cramer shot him a look; his face was expressionless, but Jane knew that Cramer resented Carroad's arrogance.

Nevertheless, Cramer obeyed; he adjusted a dial, pushed down

on a toggle switch, rotated another dial.

A voice, tonelessly and tinnily mechanical, issued from a loud-speaker beneath the tube. It repeated the phrase that Carroad had given and that Jane was thinking. It continued the repetition until Cramer, at another fingersnap from Carroad, flicked the toggle switch upward.

"As you have just heard," said Carroad triumphantly, "we have converted the waveforms into audible representations of what the subject is thinking."

The Secretary's brows rose like two caterpillars facing each other, and he said, "Very impressive."

But he managed to give the impression that he was thinking, Is that all?

Carroad smiled. He said, "I have much more. Something that, I'm sure, will please you very much. Now, as you know, this machine—my Cervus—is exposing hundreds of deviationists and enemy agents every year.

"Yet, this is *nothing!*"

He stared fiercely at them, but he had a slight smile on the corners of his lips. Jane, knowing him so well, could feel the radiance of his pride at the fact that the Secretary was leaning forward and his mouth was open.

"I say this is nothing! Catching traitors after they have be-

come deviationist is locking the garage after the car has been stolen. What if we had a system of control whereby our citizens would be *unable* to be anything but unquestioningly loyal to the State?"

The Secretary said, "Aah!"

"I knew you would be far from indifferent," said Carroad.

CARROAD pointed a finger downwards. Cramer, slowly, his jaws set, twisted the flexible neck of Cervus so that the pronged head pointed directly at Jane's distended stomach. He adjusted controls on the board. Immediately the oscilloscope danced with many intricate figures that were so different from the previous forms that even the untutored eyes of the Secretary could perceive the change.

"Citizens," said Carroad, "for some time after we'd discovered the rho waves in the adult and infant, we searched for their presence in the brain of the unborn child. We had no success for a long time. But that was not because the rho waves did not exist in the embryo. No, it was because we did not have delicate enough instruments. However, a few weeks ago, we succeeded in building one. I experimented upon my unborn child, and I detected weak traces of the rho waves. Thus, I demonstrated that the ability to form words is present,

though in undeveloped form, even in the eight-month embryo.

"You're probably wondering what this means. This knowledge does not enable us to make the infant or the unborn speak any sooner. True. But what it does allow us to do is . . ."

Jane, who had been getting more tense with every word, became rigid. Would he allow this to be done to his own son, his own flesh and blood? Would he permit his child to become a half-robot, an obedient slave to the State, incapable in certain fields of wielding the power of free will? The factor that most marked men from the beasts and the machine?

Numbly, she knew he would.

". . . to probe well-defined areas in the undeveloped mind and there to stamp into it certain inhibitory paths. These inhibitions, preconditioned reflexes, as it were, will not, of course, take effect until the child has learned a language. And developed the concepts of citizen and State.

"But, once that is done, the correlation between the semantic waves and the inhibitions is such that the subject is unable to harbor any doubts about the teachings of the State. Or those who interpret the will of the State for its citizens.

"It is not necessary to perform any direct or physical sur-

gery upon the unborn. The reflexes will be installed by Cervus III within a few minutes. As you see, Cervus cannot only receive; it can also transmit. Place a recording inside that receptacle beneath the 'speaker, actuate it, and, in a short time, you have traced in the grooves of the brain—if you will pardon an unscientific comparison—the voice of the State."

There was a silence. Jane and Cramer were unsuccessful in hiding their repulsion, but the others did not notice them. The Secretary and his bodyguards were staring at Carroad.

AFTER several minutes, the Secretary broke the silence.

"Doctor Carroad, are you sure that this treatment will not harm the creative abilities of the child? After all, we might make a first-class citizen, in the political sense, out of your child. Yet, we might wreck his potentialities as a first-class scientist. If we do that to our children, we lose out in the technological race. Not to mention the military. We need great generals, too."

"Absolutely not!" replied Carroad, so loudly and flatly that the Secretary was taken aback. "My computations, rechecked at least a dozen times, show there is no danger whatsoever. The only part of the brain affected, a very

small area, has nothing to do with the creative functions. To convince you, I am going to perform the first operation upon my own son. Surely, I could do nothing more persuasive than that."

"Yes," said the Secretary, stroking his massive chin. "By the way, can this be done also to the adult?"

"Unfortunately, no," said Carroad.

"Then, we will have to wait a number of years to determine if your theory is correct. And, if we go ahead on the assumption that the theory is correct, and treat every unborn child in the country, we will have spent a tremendous amount of money and time. If you are not correct . . ."

"I can't be wrong!" said Carroad. His face began to flush, and he shook. Then, suddenly, his face was its normal color, and he was smiling.

Always in control, thought Jane. Of himself and, if circumstances would allow, of everybody.

"We don't have to build any extra machines," said Carroad. "A certain amount will be built, anyway, to detect traitors and enemies. These can be used in hospitals, when not in use elsewhere, to condition the unborn. Wait. I will show you how simple, inexpensive, and swift the operation is."

He gestured to Cramer. Cra-

mer, the muscles twitching at the corners of his mouth, looked at Jane. His eyes tried desperately to tell her that he had to obey Carroad's orders. But, if he did, would he be understood, would he be forgiven?

Jane could only sit in the chair with a face as smooth and unmoving as a robot's and allow him to decide for himself without one sign of dissent or consent from her. What, after all, could either do unless they wished to die?

Cramer adjusted the controls.

Even though Jane knew she would feel nothing, she trembled as if a fist were poised to strike.

BRIGHT peaks and valleys danced on the face of the oscilloscope. Carroad, watching them, gave orders to Cramer to move the prongs in minute spirals. When he had located the area he wished, he told Cramer to stop.

"We have just located the exact chain of neurones which are to be altered. You will hear nothing from the speaker because the embryo, of course, has no language. However, to show you some slight portion of Cervus' capabilities, Cramer will stimulate the area responsible for the rho waves before we begin the so-called inhibiting. Watch the 'scope. You'll see the waves go from a regular pulse into a wild dance."

The cyclopean eye of the oscilloscope became a field of crazed lines, leaping like a horde of barefooted and wire-thin fakirs on a bed of hot coals.

And a voice boomed out, "Nu'-sey! Nu'-sey! Wanna d'ink!"

Jane cried out, "God, what was that?"

The Secretary was startled; Cramer's face paled; Carroad was frozen.

But he recovered quickly, and he spoke sharply. "Cramer, you must have shifted the prongs so they picked up Jane's thoughts."

"I—I never touched them."

"Those were not my thoughts," said Jane.

"Something's wrong," said Carroad, needlessly. "Here. I'll do the adjusting."

He bent the prongs a fraction, checked the controls, and then turned the power on again.

The mechanical voice of Cervus spoke again.

"What do you mean? What're you saying? My father is not crazy! He's a great scientist, a hero of the State. What do you mean? Not any more?"

The Secretary leaped up from the chair and shouted above Cervus' voice, "What is this?"

Carroad turned the machine off and said, "I—I don't know."

Jane had never seen him so shaken.

"Well, find out! That's your business!"

Carroad's hand shook; one eye began to twitch. But he bent again to the adjustment of the dials. He directed the exceedingly narrow beam along the area from which the semantic waves originated. Only a high-pitched gabble emerged from the speaker, for Carroad had increased the speed. It was as if he were afraid to hear the normal rate of speech.

Jane's eyes began to widen. A thought was dawning palely, but horribly, on the horizon of her mind. If, by some intuition, she was just beginning to see the truth . . . But no, that could not be.

BUT, as Carroad worked, as the beam moved, as the power was raised or lowered, so did the voice, though always the same in tone and speed, change in phrase. Carroad had slowed the speed of detection, and individual words could be heard. And it was obvious that the age level of the speaker was fluctuating. Yet, throughout the swiftly leaping sentences, there was a sameness, an identity of personality. Sometimes, it was a baby just learning the language. At other times, it was an adolescent or young boy.

"Well, man, what is it?" belated the Secretary.

The mysterious voice had struck sparks off even his iron nerves.

Jane answered for her husband.

"I'll tell you what it is. It's the voice of my unborn son."

"Jane, you're insane!" said Carroad.

"No, I'm not, though I wish I were."

"God, he's at the window!" boomed the voice. "*And he has a knife! What can I do? What can I do?*"

"Turn that off until I get through talking," said Jane. "Then, you can listen again and see if what I'm saying isn't true."

Carroad stood like a statue, his hand extended towards the toggle switch but not reaching it. Cramer reached past him and flicked the switch.

"James," she said, speaking slowly and with difficulty. "You want to make robots out of everyone. Except, of course, yourself and the State's leaders. But what if I told you that you don't have to do that? That Nature or God or whatever you care to call the Creator, has anticipated you? And done so by several billion years?"

"No, don't look at me that way. You'll see what I mean. Now, look. The only one whose thoughts you could possibly have tapped is our son. Yet, it's impossible for an unborn baby to have a knowledge of speech. Nevertheless, you heard thoughts, origi-

nated by a boy, seeming to run from the first years of speech up to those of an adolescent. You have to admit that, even if you don't know what it means.

"Well, I do."

Tears running down her cheeks, choking, she said, "Maybe I see the truth where you don't because I'm closer to my baby. It's part of me. Oh, I know you'll say I'm talking like a silly woman. Maybe. Anyway, I think that what we've heard means that we—all of humanity without exception—are machines. Not steel and electrical robots, no, but still machines of flesh, engines whose behavior, motives, and very thoughts, conscious or unconscious, spring from the playing of protein tapes in our brains."

"What the hell are you talking about?" said Carroad.

"If I'm right, we are in hell," she said. "Through no fault or choice of ours. Listen to me before you shut your ears because you don't want to hear, can't hear."

MEMORIES are not recordings of what has happened in our past. Nor do we act as we will. We speak and behave according to our 'memories,' which are not recorded *after* the fact. They're recorded *before* the fact. Our actions are such because our memories tell us to do such. Each

of us is set like a clockwork doll. Oh, not independently, but intermeshed, working together, synchronized as a masterclock or masterplan decrees.

"And, all this time, we think we are creatures of free will and chance. But we do not know there isn't such a thing as chance, that all is plotted and foretold, and we are sliding over the world, through time, in predetermined grooves. We, body and mind, are walking recordings. Deep within our cells, a molecular needle follows the grooves, and we follow the needle.

"Somehow, this experiment has ripped the cover from the machine, showed us the tape, stimulated it into working long before it was supposed to."

Suddenly, she began laughing. And, between laughing and gasping, she said, "What am I saying? It can't be an accident. If we have discovered that we're puppets, it's because we're supposed to do so."

"Jane, Jane!" said Carroad. "You're wild, wild! Foolish woman's intuition! You're supposed to be a scientist! Stop talking! Control yourself!"

The Secretary bellowed for silence, and, after a minute, succeeded. He said, "Mrs. Carroad, please continue. We'll get to the bottom of this."

He, too, was pale and wide-

eyed. But he had not gotten to his position by refusing to attack.

She ordered Cramer to run the beam again over the previous areas. He was to speed up the process and slow down only when she so directed.

The result was a stream of unintelligibilities. Occasionally, when Cramer slowed Cervus at a gesture from Jane, it broke into a rate of speech they could understand. And, when it did, they trembled. They could not deny that they were speeding over the life thoughts of a growing male named James Carroad, Junior. Even at the velocity at which they traveled and the great jumps in time that the machine had to make in order to cover the track quickly, they could tell that.

AFTER an hour, Jane had Cramer cut off the voice. In the silence, looking at the white and sweating men, she said, "We are getting close to the end? Should we go on?"

Hoarsely, the Secretary shouted, "This is a hoax! I can prove it must be! It's impossible! If we carry the seeds of predeterminism within us, and yet, as now, we discover how to foresee what we shall do, why can't we change the future?"

"I don't know, Mr. Secretary," said Jane. "We'll find out—in

time. I can tell you 'this. If anyone is preset to foretell the future, he'll do so. If no one is, then the problem will go begging. It all depends on Whoever wound us up."

"That's blasphemy!" howled the Secretary, a man noted for his belligerent atheism. But he did not order the voice to stop after Jane told Cramer to start the machine up again.

Cramer ran Cervus at full speed. The words became a staccato of incomprehensibility; the oscilloscope, an almost solid blur. Flickers of blackness told of broad jumps forward, and then the wild intertwined lightning resumed.

Suddenly, the oscilloscope went blank, and the voice was silent.

Jane Carroad said, "Backtrack a little, Jason. And then run it forward at normal speed."

James Carroad had been standing before her, rigid, a figure seemingly made of white metal, his face almost as white

as his uniform. Abruptly, he broke into fluidity and lurched out of the laboratory. His motions were broken; his shouts, broken also.

"Won't stay to listen . . . rot . . . mysticism . . . believe this . . . go insanel! Mean . . . no control . . . no control . . ."

And his voice was lost as the door closed behind him.

Jane said, "I don't want to hear this, Jason. But . . ."

Instantly, the voice boomed, "*God, he's at the window! And he has a knife! What can I do? What can I do? Father, father, I'm your son! He knows it, he knows it, yet he's going to kill me. The window! He's breaking it! Oh, Lord, he's been locked up for nineteen years, ever since he shot and killed my mother and all those men and I was born a Caesarean and I didn't know he'd escape and still want to kill me, though they told me that's all he talked about, raving mad, and . . .*"

THE END

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THE SPECTROSCOPE

By S. E. COTTS

The Man in the High Castle. By Philip K. Dick. 239 pp. G. P. Putnam's Sons. \$3.95.

In *The Man in the High Castle*, science fiction writer Philip Dick shows us a much broader canvas than the ones he has worked on previously. This book is bound to interest many, many people and will, just as surely, be a source of lively discussion among them. Though it can be viewed in many different ways, there can be no argument about its persuasiveness. At first description it may not seem original (it is one of the "What if . . ." plots which are a mainstay of science fiction), but the handling of the story, the wealth of psychological detail and the rightness of his characterizations all prove that Mr. Dick is very much his own man. In an area where the mediocre reigns far too often, the fresh touch shines like a veritable jewel.

World War II has ended, but

not in the way we know. The Allies have gone down to defeat, and the USA is mainly under enemy control. The Pacific States are ruled by the Japanese while the eastern portion of the country is under German domination. Once their victory is established, the real differences in aims, goals and methods between them which had been hidden under the surface of their common desire for America's downfall, bobbed to the surface again and reasserted themselves. The Germans brought to their eastern states the same efficient ruthlessness that they had used in their war efforts. The Japanese became tolerant, paternalistic and fascinated by our culture. This in itself would have been enough for a solid story, as Mr. Dick steadily develops, detail by detail, these two different ways of life, their subtle conflicts with each other, mutual attempts to adjust between conquerors and conquered.

But there is still a further plot. An infamous novel, *The Grasshopper Lies Heavy*, by Hawthorne Abendsen, is the sensation of this postwar world. Abendsen, who is the man in the high castle from the title, has written a book about a mythical world—one in which Italy betrayed the Axis powers, in which Franklin D. Roosevelt wasn't assassinated and the Allies won the war. Naturally, the Germans have banned the book in their sector, not being able, even in fictionalized form, to entertain the idea of defeat. The Japanese, however, fascinated as they are, hypnotized almost by many aspects of the people they rule, do tolerate the novel.

After allowing time for building up a clear picture of the setting and the main characters, Mr. Dick changes his focus slightly and starts to show how the idea of Abendsen's existence and his novel start to work on the thoughts and actions of some of the main characters, involving them in a course of action that lends the added dimension of suspense to an already solid achievement.

The Drowned World. By J. G. Ballard. 158 pp. Berkley Publishing Company. Paper: 50¢.

J. G. Ballard is definitely back on the right wave length with his latest book. But do not think

the title, *The Drowned World*, indicates an underwater saga of a marine culture. Indeed, the implications of the name are misleading, for the world depicted is less drowned than turned into a series of steaming, giant lagoons. Violent solar storms had diminished Earth's gravitational hold on the ionosphere, and because this barrier has become depleted, Earth no longer has much protection against the sun. All over the world the temperature began to rise. Soon the tropical and temperate zones both became uninhabitable. Under the direction of the UN, the Arctic and Antarctic regions were settled. The polar icecaps melted, and the rushing waters carried with them tons of silt, changing the contours of the land. During this time, the tempo of life altered. The population had less and less energy to cut back the encroaching jungles. There was a decline in mammalian fertility and a corresponding rise in amphibian and reptilian life better suited to the new conditions. The growth of plant forms was accelerated too, and mutations increased as a result of the higher radioactivity.

All this is ample material for a science fiction novel, but this is not Mr. Ballard's scheme. He is concerned less with the ultimate fate of the human race than with the personal adjustments of a

handful of people conducting a biological survey in one of the deserted and overgrown cities. And in particular, we follow one Kerans as he feels the pull of the sun and jungle shaping his destiny. In the ceaseless heat of these watery realms it seems only natural that Kerans' battle with himself should be couched in terms of a nightmarish fantasy and not a straightforward narrative. Kerans' gradual loss of interest in the project, his gravitation toward those who might share his feelings, his withdrawal into himself as his bodily wants become fewer, and finally his departure from the lagoon to follow the sun all form an unforgettable portrait.

It is interesting to compare this book with Ballard's mediocre last novel *The Wind From Nowhere*. That had as its focal point a natural phenomenon gone berserk so to speak. The catastrophe was used as the basis for a not very convincing adventure story, whereas in the present instance, it is used as the springboard into a superb introspective study. Might there be a path here for Mr. Ballard regarding his direction for development in the future?

Lord of Thunder. By Andre Norton. 192 pp. Harcourt, Brace & World. \$3.25.

This latest from Andre Norton

is, in a sense, a sequel to *The Beast Master*, involving as it does the same setting and some of the same characters. But it can be read independently of the earlier book without the slightest loss of enjoyment.

The hero is Hosteen Storm, a Terran who has made his home on the planet Arzor after the destruction of Terra in a galactic war. He is happy there with his cat Surra and his eagle Baqu, with whom he can communicate (in best Andre Norton fashion) and feels at home with the native Norbies who, in many ways, remind him of his American Indian ancestors. The Norbies, in turn, accept him as a friend because of his skill with animals and his respect for and understanding of their ceremonies and magic.

All goes well between the Norbies and Earth people until all the Norbies leave their herding duties and their accustomed haunts to have a grand conclave together in the sinister and far-distant Peaks. Tribes which previously had warred with each other make sudden truces in order that all can attend. And all this in the middle of the Great Dry, when to go far from water and shelter means certain death.

At the same time, Hosteen is asked by an off-Worlder to go into the Peaks to try to hunt his son who has been downed in a spaceship accident. Weak signals

from the area seem to indicate a chance that there might have been survivors from the wreck. At first Hosteen refuses, realizing the madness of going into an uncharted area, especially during the dry season. But then he is persuaded to change his mind by the Earth authorities on Arzor who are anxious about the Norbie meeting and who see the accident as a legitimate excuse to go there and observe.

Armed only with his cat, his eagle and his knowledge of magic and "medicine" inherited from his relatives, Hosteen sets off. He discovers a whole world under a mountain, learns of an uprising planned against the off-Worlders and does battle with what the Norbies know as the Lord of Thunder.

All this is written in Miss Norton's own distinctive way—a combination of a fast-paced plot with a clear, lucid style. Chalk up another superior adventure story for one of science fiction's most predictable and consistent craftsmen.

NOTES ON REVIEWING: (Whereby Mr. Cotts sounds a loud retort in defense of self and others in the profession.)

I am going to claim a privilege which I have not yet done, that of blowing off steam at certain writers in the letter column. My irritation, strange as it may

seem, is not with those fans who say "Cotts is talking up his sleeve," or "I bet he didn't even read the book," or "How could anyone be stupid enough not to like that story?" Comments such as these show that the column is fulfilling some of its goals—not simply to report on the plot, but to encourage a more analytical reading of said books and to make the fires of discussion blaze a little higher.

No, my specific complaint is with readers who put words in my mouth that I never said. Some recent examples of this come from Mr. Cunningham of Georgia and Mr. Shellum of California. Mr. Cunningham criticizes my review of Andre Norton's *Daybreak 2250 A.D.* and says "we are not all so sentimental as to require a love interest in every story we read." Then he goes on to list several fine books that contain no mention of women. True, and I could name other womanless books to join this list. But my comment did not refer merely to the book in question but to the whole, extremely large body of Miss Norton's work. And though I did mention the omission of romance, my prime concern went much farther than that—to point out the almost complete absence of any female (whether little girl, grandmother, high priestess, teacher or what), along with the comment

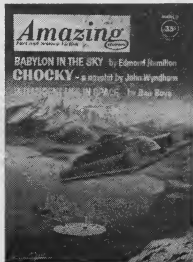
(not necessarily a criticism) that it was unrealistic.

In reviewing Damon Knight's anthology, according to Mr. Shelum, I am reported to have said that *novels should be included in an anthology?* This is Mr. Shelum's incorrect interpretation of what was printed. I used two well-known novels to illustrate an important, recognizable *category* within science fiction and criticized Mr. Knight for not including stories in *that vein*.

There are two other points I particularly want to make because they are typical of things that many letter writers have

mentioned. First, there is no such thing as a completely objective, dispassionate book review. Therefore, disagreements about books are the rule, not the exception. Secondly, it is equally impossible to say about most books that this one is good and that one bad. The number of books that are either completely great or absolutely terrible is a minuscule portion of the total books published. The vast majority of books are a mixture of good and bad points, and the extent to which the good or the bad is predominant determines how more or less worthwhile a book is.

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(Continued from page 7)

mysticism, but the science does not mask the copying of the idea. The basic story background is a direct adaptation of Burroughs'—swords instead of say pistols, animal transport (ERB's thoats vs. Kline's pseudo-bird whatzis). There is even an adaptation of Woola, Carter's Martian hound. The themes are even similar—fighting for sheer romanticism. In all of this there is but one catch—Burroughs wrote it first!

Arthur B. Loder
325 Western Ave.
Albany, N. Y.

Dear Editor:

I was extremely puzzled after reading Charles Dixon's letter concerning Burroughs versus Kline in the November AMAZING: he seems to consider himself to be quite an expert on Edgar Rice Burroughs now that he has experienced three entire John Carter novels. I can assure him that aside from *The Chessmen of Mars*, Burroughs has written much better than what the Dover paperback would lead us to believe. Still, any one of the three would be infinitely superior to Kline's entire writing career.

Mr. Dixon states that, "in adventure stories, the object is to keep the story and hero moving at all times." I can emphatically

agree with him that this is precisely what Kline does, along with other Burroughs' imitators such as Robert E. Howard, Maurice B. Gardner, and Michael Moorcock, all of whom wrote tales of sheer adventure that were as worthless as the paper on which they were printed. In his novels, Kline wrote episode after episode, all in the same superficial manner, with the only consolation being their brevity. P. Schuyler Miller described this type of adventure tale as "moving from one to another of a series of sets, in what might be a dramatization by a high school English class."

In other words, there *must* be something more than just action; no novel will survive on effects alone. Now ERB wrote with wonder, suspense, color, and above all, a sense of continuity that made his dreams appear as delicate, moving fantasies, not crude, romping-stomping burlesques that could terminate in 3 pages or in 300—depending upon whenever the author decided that our hero had been sufficiently kicked around.

Although Burroughs' style may approach the verbose, Kline's hackwork is nothing short of ludicrous. While Kline's "Peril" trilogy is passable, his Martian novels are on a plane comparable to that of a first draft. Surely you can read how

childishly awkward and stilted parts of the *Swordsman of Mars* are, and although Burroughs was no Hemingway (he still had a way with words), I believe that he at least *proofread* his novels before submission to the publisher.

And never could I muster any sort of compassion or feeling for the shallow Harry Thorne, Jerry Morgan, or Robert Grandon, but John Carter, Tarzan, or Dejah Thoris was an entirely different experience with me, and to turn the last page of one of Burroughs' novels was tantamount to losing an old friend.

Finally, Mr. Dixon, I have a request to ask of you: read a copy of Burroughs' *The Moon Maid*, and compare it to Kline's *Maza of the Moon* or *Tam, Son of the Tiger*. (*The Moon Maid* is recently back in print under the *Moon Men* title, and *Tam* will be published by the time you read this; *Maza* may see book publication.) If you can find it in your heart to say that Kline excels Burroughs, may AMAZING begin running David Bunch serials.

And if any newly-recruited Burroughs addicts are reading this, I would like to suggest that *The Land That Time Forgot* is the very quintessence of his master's craft by which more people have traveled to Mars through his books than will

arrive there via spaceship.

Burroughs did not profess to be a good writer (he wasn't); he merely tried to transport his readers into a dream that could never be . . . and how successful he was!

James Turner

R.R. #1, Box 415

Collinsville, Illinois

● *I fear we must agree. Recently re-read Moon Men ourselves and despite its fabric of clichés, one is still interested in the characters. And here (below) is still more from ardent ERB-ites.*

Dear Editor, Kaor (Martian greeting):

I'm writing in regard to Charles Dixon's letter in your Nov. '62 letter column. Having read 59 of the 60 Edgar Rice Burroughs at least twice and some three times, and all 13 of ERB's 13 magazine stories not in book form yet at least twice, and having read the original uncut version of Kline's "Planet", "Prince," "Port," "Outlaws" in old ARGOSY, & "Maza of the Moon" (plus I've read the new cut version of "Swordsman"); I figure I'm qualified to speak on the subject. In the first place, Mr. Dixon uses a very wrong comparison (The three Martian novels & the two new Kline titles), as these new Kline titles are not really by Kline! Someone rewrote these

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stories (all the new Avalon & Ace ones), mostly leaving out sentences and whole paragraphs here and there, and condensed them down to half their original size or so. For example, the original McClurg & Grosset editions of "Planet" had 358 pages & 38 chapters, while the new Avalon edition has 224 pages & 19 chapters!

In that case, you could do the same with Burroughs. Have this person abridge one of his works down to half size, and then according to Dixon, ERB would be just like Kline. What you have to compare is the original editions by Kline himself. If you take "Planet" & compare it with ERB's "Escape on Venus," in my opinion, there isn't much difference. They are both long, excellent stories! Both authors wrote fairly long stories, as they should. You have to remember that both these authors were mainly writing for adults, and not for "kids", who don't like to have to wade through a lot of words to get to the action parts. If "kids" want to read them, they can just skip over all the descriptions and such, but all serious readers want to "drink" in every word (at least I do).

In my opinion, when I read a good story I say, "The longer, the better!" I like real long stories as I read for entertainment, and not just because I have to

and want to get finished with the book as soon as possible. I know most authors don't have a knack for writing good long stories, but ERB & Kline did and they were both equally good at times. If they had published "Planet" under the name ERB, I doubt if I would have doubted ERB wrote it. So, as you see, Dixon's whole statement is wrong to begin with—Kline & ERB both wrote long stories. Some people think Kline is no good because he's just an "ERB imitator", but they're wrong. Kline had already established himself firmly in WEIRD TALES & other magazines before he began to write his ERB-type novels. Kline uses all his own characters and only the style is the same.

Although I've seen many stories advertised "reads just like Burroughs", there are very few ERB-type authors. Kline is the closest, of course, then there's Howard Browne's Tharn stories, William L. Chester's Kioga stories, and I believe that's it (of all the stories I've read, at least). I've seen Maurice B. Gardner's Bantan stories and Robert E. Howard's Conan stories advertised "in the ERB-style". They are very good stories in their own right (I've read all but one of the 6 Bantan books, and all of the Conan stories), but they're not in the ERB-style! When you

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know that ERB's Tarzan stories alone have sold over 50,000,000 copies in some 56 different languages, you know that any author that popular must be not only a good writer, but an excellent one!

There is even a club for ERB fans called the *Burroughs Bibliophiles*, of which I am a member. We now have over 250 members. There are at least 4 different fanzines currently being published solely about ERB & his works, and there have been at least 6 others published just in the last several years.

There have been 6 ERB's TARZAN serials made and 31 TARZAN movies made (though, except for some of the silent ones, these movie Tarzan's are no more like the real Tarzan as created by ERB than Khrushchev is the Pope!); there was one ERB non-Tarzan serial and three ERB non-Tarzan movies. There were 364 fifteen minute episodes of Tarzan on the radio back in the '30's, and 65 half-hour radio episodes of Tarzan in the '50's, Tarzan was produced on the stage back in 1921 in NY. Now, Mr. Dixon, could anyone who created such a character as Tarzan be anything but a great writer?? Of course not!

How much of Kline's material has received such treatment? None! How many were made into

movies or serials? One ("Call of the Savage", 12 chapter movie serial, 1937, with Noah Berry, Jr. as Jan)! Sure Kline is a good writer, in fact almost as good if not as good as Burroughs, but never better. Nor should ERB have written shorter stories (in my opinion, in fact, he should have written longer ones). Both Kline & Burroughs did about the best, though I imagine each person can point out changes he would like to have seen in some of his stories. Anyone who has the chance should read the original Kline stories, either in McClurg or Grosset editions or in their original magazine appearances.

I wonder how many ERB & Kline books Dixon has read? If he couldn't finish "Master Mind" then he just doesn't like good literature. Once I started any ERB book (especially for the first time), I couldn't stop until I'd read the whole thing, and the same goes for all the Kline I've read. Both authors were excellent entertainers, bearing out one article by Burroughs titled, "Entertainment is Fiction's Purpose." Yes, indeed, they were both excellent authors, and we'll not see their like again for many many years, if ever!

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